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COMMUNICATIONS.

TUBERCULOSIS.[1]

BY J. H. MUSSER, M.D.,
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Stenographically reported by Wm. H. Morrison, M.D.

My object, Mr. President, in presenting this account of tuberculosis—of tuberculosis in its entirety—is not to announce anything original, even if it were possible, in regard to the subject, but rather to present it as I think the present state of our knowledge warrants us in considering it, and, in the course of the statements which I shall make, to illustrate the various phases of the subject and its various anatomical and clinical points by the citation of some cases which have occurred to me during my study of it.

I regret very much that, for want of time, I shall be unable to present a series of specimens illustrating the various forms of tuberculosis, not only of pulmonary tuberculosis in which I am more especially interested, but also of the other varieties which I shall mention later. I, however, trust that it will not be long before I shall be able to show both macroscopical specimens and microscopical preparations illustrating the various points which will be brought out in the discussion of this subject. My remarks are based largely on the views of the later workers in tuberculosis, and my support of their statements is based upon the autopsies of some seventy cases carefully recorded, which I have made in the Philadelphia Hospital.

In the first place, in order to be precise, I shall state what I mean by the term tuberculosis. Tuberculosis is a specific infectious disease, the phenomena of which are due to the presence, in one or more organs or universally throughout the body, of the tubercle bacillus. Such is the definition warranted by our present knowledge. Whether or not the phenomena of tuberculosis are due to the tubercle bacillus alone, I am unable to say, but there undoubtedly is present in

[1] An address delivered before the Philadelphia County Medical Society, December 26, 1888.

every lesion tubercular in character, sometime in the course of its development, this micro-organism. Just here let me state the varieties of tuberculosis which we are called upon to see. I do not refer alone to pulmonary tuberculosis in all its phases, but in addition, to the so-called joint tuberculosis, the fungous disease of the joints; to the so-called scrofulous disease of the lymphatic glands, the cheesy glands, lymphatic tuberculosis; and also to tuberculosis of the genito-urinary tract, to tuberculosis of the serous membranes, as tubercular pleurisy, tubercular meningitis, and tubercular peritonitis. Then too, included among the forms of tuberculosis, we have the well-known disease, lupus. From recent observations, I have no doubt that this disease is of tubercular origin. Finally to tuberculosis belongs that most interesting general infectious disease, miliary tuberculosis.

A word in regard to tuberculosis of the lungs. I recognize in pulmonary phthisis only one condition, namely, tubercular phthisis. Such has been my experience. This, however, has its varieties. There is in the first place simple tuberculosis of the lungs—the racemose variety of tubercular infiltration; there is the cheesy variety, caseous phthisis, pneumonic phthisis; there is tubercular catarrhal pneumonia, and fibroid phthisis. These are the forms of tuberculosis found in the pulmonary structure.

By a tubercle I mean a specific inflammatory growth characterized by the presence of round cells, epithelioid and giant cells, and in addition by the presence of the specific irritant, the tubercle bacillus. This organism is present in all forms of tuberculosis. In the tubercle itself, it is universally present. The relation of it to the causation of tubercle depends upon a number of causes which I shall endeavor to detail. The bacillus is the specific element of the inflammatory growth, and the tubercle therefore is nothing more than an inflammatory growth characterized by the presence of this specific element. Round cells, lymphoid cells, epithelioid cells and giant cells are frequently found under other circumstances; but in tuberculosis we never find them without also finding the tubercle bacillus. In the tubercular process a tubercle of the histological characters mentioned need not necessarily be present. These inflammations occur without organized tubercle, as in tubercular catarrhal pneumonia. In this, as in all tubercular processes, whether or not a tubercle is found, the tubercle bacillus is present. On account therefore of the universal presence of this organism—for it is found not only in pulmonary tuberculosis, but also in the other forms of tuberculosis which I have detailed—on account of the fact that by the methods comparatively recently introduced by Koch, this organism can be isolated by means of cultures—and it is the only organism that is isolated by the culture process from any tubercular lesion whatsoever; and because by the inoculation of the organism tuberculosis is produced, we are warranted in giving to it the highest etiological prominence.

For these reasons we are warranted in emphasizing the unity of tuberculosis, the common element being the bacillus. Moreover, the organism is found in the products of tuberculosis, as for instance in the sputum, in the pus from caseous glands or from diseased bone, or in the fluids that come in contact with infected centers, such as the urine in tuberculosis of the kidney and the stools in intestinal tuberculosis. It is found here not because the urine is pathogenic, but because the bacillus is washed out by the urine. It is found in all the discharges that arise from the irritation of this organism. When I say that it is found in all the discharges, some limitation must be made; for instance you may tap a tubercular pleurisy and fail to find any bacilli; or, more likely still, a caseous gland will be aspirated, and while we should expect to find the tubercle bacillus in the products of suppuration, this is not always the case, and for two reasons: In the first place, and this is the minimum reason, the bacillus is not abundant in the pus from tubercular lymphatic glands. There is not an excess of growth. In the second place, it is well known that the organism, especially in suppuration, may escape and not be detected by our cultures and staining. It is said that it is more particularly apt to escape in the process of suppuration, and while found in the tissues is not found in the degenerated products. There is, however, this point to prove the specificity of the product, namely, that if you take the product, even where you have failed to find the bacillus, and inoculate with it, tuberculosis is invariably produced, so that by inoculation of the bacillus isolated by culture, or by inoculation of the products of inflammation or by the inoculation of the inflammatory growth itself, tuberculosis is induced. The law is absolute that tuberculosis alone produces tuberculosis and that nothing else whatsoever will do it. An explanation of the fact that the inoculation of products of

inflammation in which the tubercle bacillus may not be found, causes tuberculosis, is said by careful workers in this subject to be found in the presence not of the fully developed bacillus itself, but of the spores of this bacillus.

While therefore a tubercle is nothing more than an ordinary inflammatory growth, the result of the action of the specific irritant differs very much and does not necessarily cause tubercle alone. Thus in tuberculosis, the further process in the development of the disease, or perhaps in the immediate effect of the irritation, is frequently seen in caseation. This is most marked, and it is almost one of the specific elements of tubercular disease. It is true that caseation takes place under other circumstances. It is found, for example, in carcinoma and gumma, but it is especially characteristic of tuberculosis. There is one form in which caseation or caseous necrosis is so common, that it is known as caseous pneumonia or caseous tuberculosis: the cheesy variety of tuberculosis. I can give no explanation for the presence of the change. Coates has recently stated that caseation is so general, so universal in tuberculosis that it may be considered part and parcel of the tubercular process Another feature of this specific inflammatory growth is its marked tendency to fibroid change. Anyone who has examined the various forms of tuberculosis, and particularly pulmonary tuberculosis, will have often seen this. There is almost constantly a marked tendency in some areas for the occurrence of an overgrowth of connective tissue. This is conservative, and part of the process which leads to healing, which is much more frequent than we generally admit.

I have said that tuberculosis is an infectious disease. That this is so is well known, particularly from the fact that it can be reproduced by inoculation of the tuberculous inflamed mass or its products as I have already pointed out, as for instance serum or sputum from tubercular lesions. As you well know, Tappeiner, long before the discovery of the tubercle bacillus, found that he could set up tuberculosis in animals by the inoculation of sputum from tubercular subjects. The pus from caseous glands, from a suppurating lung or from a pulmonary cavity will also, by inoculation, produce tuberculosis. I will refer later to a further proof of the infectious nature of tuberculosis, as proved by the fact that eating the flesh of tuberculous animals or drinking the milk from tuberculous cows has frequently caused the disease. Moreover, one characteristic which belongs to all forms of infectious disease, obtains also in tuberculosis: I refer to incubation. This is definitely and quite positively proved. It is well known that in tuberculosis artificially produced, the disease arises in from fifteen to twenty days after inoculation of the tubercular matter. The experiments on this point are absolute and final, and cannot be gainsaid. This is proved not only by the experiments of Koch and his fellow-laborers, but even by experiments made before the period of the full knowledge that the tubercle bacillus existed. It was well known that in a definite period after the inoculation of certain materials, tuberculosis would develop.

Not only is this period of incubation shown in the production of tuberculosis artificially, but it is also occasionally seen in the human subject. It has been traced in some epidemics and outbreaks of tuberculosis, where in a definite period after the ingestion of flesh or of milk from diseased animals, tuberculosis has developed. It is, however, very difficult to determine this period of incubation in the human subject, and in fact, if we had not the results of experiments on animals, we should not be warranted, for reasons which I shall refer to further on, in stating that a certain number of days was the period of incubation. Attention has been called by Coates and Woodhead to the fact that in cases of old quiescent tuberculosis, there has been after the occurrence of hemorrhage the involvement of the general system in the course of fifteen to twenty days. After such a hemorrhage, tuberculosis sets up and from that time the progress is rapid. At the autopsies the lesions of general tuberculosis are found and also the lesions of the old, quiescent local disease. Just such a case presented itself in my wards of the Philadelphia Hospital, in the person of a healthy-looking, burly negro who had for a long time been the subject of a cough. There were present the physical signs of a circumscribed pulmonary cavity, but that the disease was not making any inroads upon his health, his condition testified; and that the lung was not generally involved, the physical examination showed. A short time after coming under observation, he had a hemorrhage, and about twenty days after the bleeding fever made its appearance with all of the phenomena of tuberculosis, and in five weeks he died of general tuberculosis, infected by the local disease of the lungs.

If the tubercle bacillus is related to the causation of tuberculosis—I have merely affirmed that it is universally present in the tubercular products—its mode of introduction into the system must be accounted for. It can be introduced by inhalation. Experiments have proved this. There is a fair amount of clinical and experimental evidence, if properly weighed and sifted, to show that by the inhalation of the products of tuberculosis, the disease can be set up. Tappeiner many years ago produced tuberculosis by causing animals to inhale the dried sputum from phthisical patients. There is no doubt that this is a common source of the disease, perhaps more common than we are willing to admit. In hospital wards where there are a large number of cases of tuberculosis, there is no doubt that the air is fully infected. The air in the Philadelphia Hospital at one time was examined by processes which all sanitary experts and others who work in this subject well know, and in some of the wards it was found to have the tubercle bacillus floating freely through it.

The tubercle bacillus is also taken into the system by means of the food. There is no doubt about this, and there is no necessity to cavil about it. The eating of the flesh of animals infected with tuberculosis has frequently caused epidemics of this disease. More especially may it be caused by milk from infected animals.

Here comes up an interesting remark made by Woodhead on this very point, that cases of infantile tuberculosis, and of local epidemics of tuberculosis, have been undoubtedly traced to the use of milk from cows in which there has been tuberculosis. The tuberculosis need not be general in the animal, and hence no general symptoms, for in several instances it was limited to the udder, and thus infected the milk. Not only is the tubercle bacillus found in the tissue of the udder, but also in the milk with the other secretions. Animals, as for instance, pigs that were fed with it, died of tuberculosis, and by staining the fluid, as well as by cultures, the organism was found. Heubermaas, more wonderful still, reports eight cases of infants, infected from their mothers, on account of tubercular mammitis.

Another way in which the tubercle bacillus may enter the system is by absorption. There has recently been sufficient evidence produced to show that by the absorption of the tubercle virus through the skin, the disease may be set up. In all probability caseous glands are thus caused. There is skin irritation, exposure to the tubercle bacilli, and as a result secondary disease of the glands. This is not as positively proved as the other modes of introduction of the poison; but there is strong evidence that it may occur. That we have tuberculosis of the skin is well known, as seen in lupus.

One of the most interesting facts, or series of pathological facts, in regard to tuberculosis, is its method of spreading throughout the system after being introduced. It is of course known that it is locally infective and that it usually extends along the course of the lymphatics, but it is also important to remember, as Coates points out, that tuberculosis is a disease of surfaces and channels, and that the organism, or the products containing this organism are moved about over these surfaces and in that way infection takes place.

If there is tubercular disease anywhere, local infection is very readily seen in the tissues about the lesion. This is particularly seen in phthisis. Around the old lesion—a cavity or caseous mass—a dense area of tubercular infiltration is seen, and then an area of scattered tubercles, more and more separated, and younger and younger, until the healthy zone is reached. Along the course of the lymphatics the disease develops and has often been seen. This is possibly seen more frequently in tabes mesenterica than in any other variety. Even in adults you can often trace from a local area the course of the infection throughout the body. In a case which was under observation some time ago, there was tubercular disease of the lymphatic glands around the bronchi at the root of the lung, the lymphatics coursing toward the pericardium were markedly tuberculous and at the autopsy the disease could thus be readily traced to the pericardium. The pericardium was infected, tubercular pericarditis was set up and the patient died as a result of the enormous pericardial effusion, thus excited. Over and over again this has been seen. Coates, and a number of others, have reported examples in which, from old lesions, which were undoubtedly present, in the mesenteric glands, the tubercular process spread to the remainder of the lymphatic system, to the peritoneum, spreading over the surfaces of the diaphragm, from thence extending to the pleura, and in some instances even to the bronchial lymphatic glands. Subsequently the lung became infected. This is one method of the origin of pulmonary tuberculosis. Koch, Woodhead and others mention such cases, and those

who have made many *post-mortems* have seen old lesions of the bronchial, the cervical and axillary or the mesenteric glands with secondary infection of the lungs or the entire system. In one recorded instance the ulceration extended from a caseous gland into a bronchus and thus the lung was rapidly infected. While the patient had been in ill health for some time, yet the occurrence of general tuberculosis was shown by the acute manifestations, and at the autopsy the lesions were found.

I shall not speak in detail of the different channels through which the disease may extend, but shall for a moment refer to a form which anyone can prove for himself. It is well known that after laryngeal tuberculosis begins, general pulmonary tuberculosis takes place sooner or later, and this readily, because the products of the laryngeal disease are aspirated into different areas of the lung, and thus the pulmonary structure is infected. In the same way the disease may extend throughout the lung. There is, for instance, infection of one apex, and fluids from this area are drawn, by aspiration and the position of the patient, into other parts, which are secondarily involved. As long as consolidation alone is present—there is usually no secondary involvement, and, indeed, if caseation and ulceration do not take place, but on the other hand the opposite process, fibrosis, ensue, there will be no secondary involvement. The occurrence of intestinal tuberculosis following pulmonary tuberculosis is due to the fact that the products of the disease in the lungs are swallowed and thus the intestinal canal is infected. And in a manner similar, tuberculosis of the genito-urinary apparatus is evolved, either from the kidneys to the remainder of the apparatus, or more frequently from a tubercular testicle along the lymphatics to the other strictures.

A word in regard to some interesting evidence as to the manner of general infection of the body from local disease as shown in miliary tuberculosis. For a long time we were unable to explain miliary tuberculosis, and how it was that the organism became infected. While even yet there are many cases of which we can not speak positively, yet the researches of Ponfick, Weigert and Coates leave no doubt that if careful search is made it will be found that the organism has been infected through the thoracic duct from an infecting tubercular mass in any portion of the body or from extension of the tuberculous process to the veins. This latter method is discussed by Weigert. If a careful search is made the origin of the affection can usually be explained. I have seen it once or twice and demonstrated its course once this year and once last year. It is not often that opportunities for studying acute miliary tuberculosis present themselves. Coates explains the occurrence of the disease by involvement of the veins adjacent to or supplying the diseased lymphatic glands and by infection of the system through the blood. We know that the tubercle bacilli are found in the blood and in the spleen, as well as in the infected tissues.

There are a few characteristics of the growth and development of the tubercle bacillus which explain very well the clinical course of tuberculosis, and in studying tuberculosis it is most important to consider them. From a knowledge of these features we know why it is difficult to reckon the period of incubation or the date of first infection; why the disease is one of long duration; why it is so frequently cured, and why it is so difficult to determine the contagiousness of the disease and the relation of predisposing causes—such as sex, age, occupation, climate, etc.—to the origin of the disease. In the first place it is well known that it develops slowly. This is seen in culture preparations. It is also seen when inoculation is performed. It is true that local irritation is set up, but the general development is slow; hence the disease is always of long duration. It is particularly on this account that we are unable to tell when the person has been infected. For instance, I may be exposed to the tuberculous poison now, I may have inhaled the tubercle bacilli in large numbers, but my tissues may not be in a condition to afford a place for their rapid development. There is not epithelial abrasion to admit of the introduction of the bacillus, or there is not that low vitality of the cells which must exist before there can be bacillary growth. But the organism is not readily destroyed. It may find a lodgment, but not a soil for growth. It may, however, retain its vitality for a long period of time, a second peculiarity of its life. It will live for a long time under unfavorable circumstances and for a long period of time remain quiescent. It can not, indeed, be definitely estimated how long this may continue. In scrofulous disease of the glands we know how long the duration of the disease is. I have now under my care a

colored woman who has been under my observation for two years, in whom a long time ago tubercular disease was shown to be present by the discovery of the tubercle bacillus in a section of a gland taken out. The patient is still in fair health. The disease is progressing, but only slowly. This is also illustrated in the case of a man who recently came under my care, from whom a large number of lymphatic glands were removed by Dr. Pancoast in 1876, at the Jefferson clinic. Only the glands on one side were removed. The glands of the other side continued to grow and from the glands of the neck, the disease extended to the bronchial glands, thence to the mesenteric glands. The relation of the different growths, as regards the point of time, was distinctly shown at the autopsy by the characters of the inflammatory growths of the different parts. It could be seen that the older lesions were in the neck.

We have every reason to think that the primary disease was in these glands, from the clinical course of the disease. After slowly increasing in these glandular structures, acute tubercular catarrhal pneumonia developed and then general tubercular disease, tubercular meningitis being the immediate cause of death. This case shows the slowness of the growth and its power of the bacilli to live under ordinary circumstances of human life without destruction, and this fact explains the long duration of all forms of tuberculosis.

Remember too that the duration, as well as the virulence of the disease is influenced by the number of organisms which have been introduced, as has been shown by many and recently by the experiments of Dr. Trudeau. As you know, he has recently published a report of experiments in which, after the introduction of a certain dose, the disease developed in some up to a certain point and in others lasted for a certain period of time. If a larger dose were given, the course was much more rapid, the general infection more acute and more pronounced. Therefore the slowness of growth, and the number of bacilli introduced are all points explaining the duration of the disease.

As is well known, tuberculosis, including pulmonary tuberculosis and all varieties of the disease, is frequently cured or rather gets well. Under ordinary circumstances, tuberculosis tends to heal. Anyone who has followed the course of a large number of autopsies will have frequently seen instances of arrested tuberculosis, not only in the lymphatic glands but in other structures, as in the bones and in the lungs and even in the intestine. Not long ago, Dr. Osler made an autopsy on a patient in whom there were tubercular lesions in the intestine, some of which were progressing, while others were healed, and cicatrices were found.

In regard to the method of healing I shall not speak for want of time, except to say that it is by an overgrowth of connective tissue surrounding the specific inflammatory growth, the tubercular mass itself.

If, as is stated, one-seventh of all deaths are due to phthisis, the number of cases of tuberculosis must be very great, much greater than is generally admitted. Gardner in speaking from his own experience of tabes mesenterica, and also of other forms, says that they are much more prevalent than was formerly admitted. If one-seventh of all deaths are due to tuberculosis, we would almost be warranted in saying that one-fourteenth of the human race are infected with tuberculosis without evil results. In the autopsies made at the Philadelphia Hospital it is surprising to see the almost universal presence of this disease in a more or less active state, in patients dying from other affections, such as Bright's disease or carcinoma. In a patient recently under my care, for instance, who died of carcinoma of the stomach, there were found tubercular foci and ulceration in the lungs, and this observation could be multiplied. An abundance of examples of healed tuberculosis, as the puckered apices and the encapsulated nodules show, are constantly found.

With regard to contagion. I am inclined to the belief that tuberculosis is contagious, but only feebly contagious. And this is due to the peculiar characteristics of the tubercle bacillus itself. The reason why the disease is not more contagious and more prevalent is because the tissues are not in such a state of vitality as to be receptive to the bacillus, or to form a nidus or a soil for its development, and because there are no pathological processes present through which the tubercle bacillus can enter. Just as it is difficult to determine the period of incubation and the manner of introduction of the bacillus, so it is difficult to determine whether or not the disease is contagious. I may be exposed to the tubercular poison and have inhaled quantities of it at a certain period. This may find a resting-place in my lungs or it may have been taken into the lymphatics; and yet my health and the condition of my

bronchioles and alveoli or gland structures may be such that there is nothing whatsoever to encourage the development of the bacillus, and it will remain quiescent. It is difficult to kill the organism. It will remain quiescent for long periods of time under the ordinary conditions of life, and then from one cause or another, as a long period of indigestion, worry, strain, or break-down of any kind, there is lowering of the vitality of the cells sufficient to allow the growth of the micro-organism and then it is that it develops. This period between the reception of the poison and the development of the disease may be so long that we can not positively trace its cause. It may have been forgotten. The predisposing factors just mentioned become operative in this manner.

I shall not enter into a discussion of other phases of this subject. Already sufficient time has been occupied. The prevention of tuberculosis or its treatment will not be spoken of. Practically, however, the treatment consists in prevention or in attending to the wants of the economy so as to prevent cell life of low grade. I have taken up more time than was intended, but the subject is one of such great interest that it is proper to present some conclusions in the manner which I have done. It is true it has been done in a most cursory and rather unscientific manner, and yet I trust I have shown that tuberculosis is an infectious disease of bacillary origin. A strictly scientific method of presentation of the subject has been sacrificed to one that is truthful, and yet at the same time clear, I trust. The evidence has not been presented as forcibly as my convictions are strong on the subject, and yet it seemed advisable to present the truths in a semi-popular manner. If these remarks are sufficiently clear and earnest to interest and arouse you all, I am content.

N. E. corner Locust and Fortieth Streets.

—The *New York Medical Journal*, Dec. 15, says "Away with the cant that anyone can write too well, or draw too well, or speak too well. Boorishness in style is not evidence of intellect, nor slovenly expression the necessary accompaniment of cultivated observation. Such defects are to be deplored. Their meaning goes deep. A university graduate suggests that it should be a point of honor among medical men to write in such form that an educated person can tell what the subject matter is, though not himself an expert in medical lore."

THE IMMEDIATE TREATMENT OF FRACTURES OF THE EXTREMITIES.

BY ERNEST C. HELM, M.D.,
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All surgical authorities will agree with Wyeth when he says:

"The great end to be achieved in the *treatment* of fractures is a reduction of the displacement to as near the normal as possible, and the absolute retention of the parts as replaced;" and, as Dr. Edmund Andrews of Chicago, Ill., teaches: "Put the parts in correct position and keep them there." The first part of this advice is usually not very difficult of accomplishment, especially if an anæsthetic is used; so assuming that the bones are in correct position, what is the best way to keep them there?

It is probable that no *perfect* dressing will ever be found, and that a plan advocated now will be antiquated in a few years.

The splint that is safest and most comfortable to the patient, and requires the least care or anxiety on the part of the surgeon, will be a blessing to all concerned.

It seems to me that the splint of the future will be a rigid one, and will be applied at once The primary dressings usually advocated in older, and even the most recent, works on surgery are temporary expedients and makeshifts and are to be used only "*until the swelling has subsided*," and then a rigid apparatus is to be used. This method is all right if the patient lives at a great distance, but in hospital, or where the patient can be seen frequently, for a few days, a splint can safely be used which would absolutely retain the parts as replaced. This fear of swelling is a great bugbear to most young physicians, and therefore with the dread of constriction and mortification before them, temporary dressings are used until swelling has subsided. The patient's sufferings are greatly increased, the provisional callus is much greater, and the cure less rapid and satisfactory than it would be if an immediate fixed splint had been applied.

When the patient has not been seen until the swelling has become great, the surgeon may be forced to use temporary expedients; but if he is seen early, or before there is great swelling, a firmly yet smoothly applied fixed dressing, extending from near the tip of the extremity to well above the seat of fracture would hold the parts as replaced, and moreover, by affording firm

and even support of the tissues, would prevent much swelling. The fragments being immovable, there could be very little callus, and repair would be rapid and uninterrupted. Swelling usually results from an uneven or tight dressing, and from not extending splint (or at least a bandage) well down toward the tips of the extremities. Levis's splints, strengthened by gypsum, have proved very satisfactory in my hands. The Levis splints being moulded to the shape of the limb, and being very light and strong, aid greatly in retaining the limb in proper position while the plaster is "setting."

There are two great objections to plaster of Paris alone: First, while the plaster is "setting," the limb has no support except the hands of the assistant, which often cannot keep the parts exactly as placed; second, the hands, and especially the fingers, deeply indent the soft plaster and make corresponding ridges on the inside of the cast, which may become very painful to the patient.

The use of the Levis splint with the gypsum obviates both of these difficulties. The objections to the perforated tin splints alone are that they are not rigid enough, and are rather short. But as they are strong and light, their conjoined use with plaster of Paris renders the latter lighter than it would be without them, as less plaster is required to obtain the needed firmness. There is nothing new in my mode of application, which is to apply a well-padded Levis splint to the adjusted fracture, securing it there by a few turns of a roller bandage; then to wrap the limb and splint in a thin layer of cotton, and apply plaster-of-Paris bandages until the desired firmness is obtained. The plaster extends from the base of the phalanges to considerably above the fracture —above the next upper joint if possible. In fractures of the femur or the humerus the gypsum may not have to extend so far down, but then a bandage would have to be used from the base of the phalanges to the plaster, otherwise swelling would ensue.

The patient will have to be seen in a few hours, and if there is little pain, and the fingers or toes, as the case may be, are not cold or blue or swollen—in other words if the circulation is good in them—the patient may be left. It is well to see him several times during the first four days, and to instruct the nurse to call you instantly if there is much pain or swelling. After four days the patient will require little care. Should pain or swelling be great the bandage can be loosened by a longitudinal incision, and a roller applied. This in itself is a fine and quite rigid dressing. Usually, however, the circulation continues good and the patient comfortable.

The advantages of immediate fixed dressings are so obvious that I need not refer to them here. Their dangers have been greatly exaggerated, for if carefully and intelligently watched for the first few days, they are probably safer than any other. As there is little if any movement, there is much less provisional callus, and consequently, if the fracture is near or involves a joint, there will be less danger of anchylosis; though in joint injuries the splint should be removed and passive motion practised as soon as it is deemed safe. I could cite many cases in which this mode of treatment has been used, but will mention only four or five very briefly.

On July 4, 1888, my brother, Dr. A. C. Helm, and I treated a case of Pott's fracture in the manner indicated. It was a railroad injury and there was great displacement, yet the recovery was almost painless and both rapid and uninterrupted. A few days later we treated a fracture of both bones of the forearm in the same manner, with very satisfactory results. This was originally a case of green-stick fracture, but both bones were broken in the attempt to straighten them. A fracture of the femur in a child three years old was easily treated by this method of dressing, and so was a fracture of both bones of the leg, just below the middle.

An old man last February broke his arm at the elbow, the fracture extending through the humerus just above both condyles, splitting between them into the joint. The method of treatment I have described was as satisfactory here as in the other instances. In none of these cases, indeed, did the dressings have to be loosened or changed on account of swelling.

Whether this plan meets the approval of the readers of the MEDICAL AND SURGICAL REPORTER or not, I can only say that in my hands it has not disappointed me once, but has always exceeded my most sanguine expectations. I hope others who may have adopted the same method of treatment will give the result of their experience.

—Typhoid fever is said to be prevalent in Vienna. There were 10 cases in June, 32 in November, and 40 up to the 17th of December. This shows an increase of about 50 per cent. over the total for 1887.

THE TURKISH BATH AND ITS USE AS A THERAPEUTIC AGENT.[1]

BY A. HAMILTON DEEKENS,
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The subject I wish to bring before you this evening is one in regard to which, as future physicians, I think we should be to a certain extent familiar, *viz:* "The Turkish Bath and its use as a Therapeutic Agent." A certain amount of knowledge of this now popular mode of treatment is demanded both in our own and our patients' interests. The attention of the laity has been attracted, during recent years, toward the Turkish bath, as a means of cure for various disordered conditions of both body and mind; and they naturally turn to the physician for his professional opinion on the subject, and it is but fair to them, that he should study its merits and demerits, according to his best judgment, and give his patient the benefit of any good there may be in this system.

Until quite recently, most people, including the majority of physicians, have had exceedingly erroneous and exaggerated ideas concerning the Turkish bath, and have conjured up the most frightful visions of the barbarities and tortures the poor victim underwent, who dared enter the portals of this relic of heathenism. No doubt many of these ideas originated in the writings of various humorists—of Mark Twain, for instance, who, in his inimitable book "The Innocents Abroad," gives a vivid description of the tortures he underwent in this Purgatorial region, winding up with his being almost flayed alive with the jack-plane, as he facetiously terms the shampooing brush.

It is true, that when first introduced into England and this country, too much physical energy was occasionally expended on the devotee of the bath; but this, with many other ignorant and unnecessary customs, has almost entirely disappeared, and in modern well-conducted bathing-establishments, everything is carried out according to the most approved anatomical and physiological principles.

The Turkish bath is no new invention. It is as old as the human race. It has been found in all climes and ages, and in every grade of social condition. It is one of the most ancient therapeutic agents of which we have any record. *Heat is its vital* principle. Most nations of the world have recognized this fact. The greater part of Europe used the Turkish bath in one form or other; even the Indians of America were familiar with its application. The ancient Phœnicians used the bath daily, as did also the Greeks. The Romans received the idea from the Greeks, and thus originated the famous Roman baths. When Constantine founded Constantinople he took with him the system so general in Rome, and constructed baths which were among the most magnificent structures in the world, and thus they came to be called Turkish baths.

Our modern so-called Turkish bath, however, would be more appropriately named the "Anglo-American" bath, as to this country and to England belongs the honor of having first introduced the dry air system. Dr. Barton, of England, was the first to discover that the real value of the bath lay in its heat, and was the first to put this discovery to a practical use. He built the first bath ever constructed on the dry air principle, at St. Anne's on the Hill, near Blarney, in Ireland, in 1856. Mr. Urquahart, who has written a well-known book on the Turkish bath, was the first to introduce this system into England, and we are indebted to Dr. Sheppard, of New York, for its first appearance in America. He erected a bath on Laight St., New York City, in 1862. In Ireland, even at the present time, are to be found "sweat-houses," as they are called, the use of which has not entirely died out, and which stand as heirlooms of an ancient people, who in their simple and practical way knew more of the hygienic conditions of life than most of us, in this scientific age, find it possible to put in practice.

One of the national characteristics of the Finlanders of Northern Europe was their constant use of heat, as a means of health, and their manner of using it. Nearly every peasant had a small private bath-house, for his own immediate use. It consisted of one small chamber, in the innermost part of which was placed a pile of stones, which were heated until they became red hot, then a stream of water was directed on them, and the Finn luxuriated in a true Russian or vapor bath. Their power of endurance of heat was wonderful. They would remain in a moist atmosphere at a temperature of from 130° to 150°, for half an hour or more at a time, at the same time going through a system of rubbing, and lashing every part of their bodies with birch twigs, until they

[1] A paper read before the D. Hayes Agnew Surgical Society of the University of Pennsylvania.

presented a very raw appearance. In the winter season, they would frequently go out of the bath in a perfectly nude state, and roll in the snow, when the thermometer stood at 20° or 30° below zero. These hardy natives claim that their strength is recruited as much by the hot vapor baths as by rest and sleep, and such a thing as gout or rheumatism was unknown among them. I do not think, however, that I should advocate their form of bathing, as it would scarcely be suited to the American constitution.

To give you a general idea as to the proper manner of taking a Turkish bath, I will describe the different stages of the process, as carried out in our better class of bathing-establishments. The bather first registers his name and pays his fee, one dollar is the usual price, with half rates to physicians at most places; the bather's valuables are checked and deposited in a safe and the bather is shown to a private dressing-room, where he disrobes and arrays himself in a sheet, after which he is conducted by an attendant through the vestibule to the *tepidarium*. Here a sheet is spread over a reclining chair and the bather takes his place in it. The temperature of this room usually varies from about 110° to 120° or 125°. The air, although so much above summer heat, is not oppressive to most persons, and, owing to good ventilation, it is delightfully pure and soothing. Here the bather remains for a variable length of time, according to his feelings, stretching out his limbs in comfort and allowing care and anxiety to drift from his mind. After being thoroughly heated here, the bather next enters the *sudatorium*. This is a large, well-lighted and well-ventilated room with a temperature of from 140°—160°. Here the flow of perspiration, which began in the *tepidarium*, increases and some of the pleasantest features of the bath are experienced. To give you some idea of the effects of this stage of the proceedings I cannot do better than to describe the sensations as told by Prof. Erasmus Wilson, who is an ardent advocate of the bath.

He says: "The air is clear, no vapory mists. It is fresh, for there is a free circulation of air through the room, and how marvellously soothing! All care, all trouble, all anxiety, all memory of the external world and its miserable littleness is chased from our mind; our thoughts are absorbed in rapturous contemplation of the delights of the new world, the Paradise into which we have just been admitted. The tyrant *Pain!* even loses his miscreant power. The *toothache*, where is it gone? The *headache* disappears, the *spasm* no longer abides, the grinding aches of craving appetite, the pang of *neuralgia*, of *rheumatism*, of *gout*, all have fled, for this is the region where the suffering find a soothing relief from all their torments, and over the door, is it not written, *This is the Calidarium*, *pain* enters not here."

The temperature of this room is sufficient to secure all needed physiological effects, but for certain diseased conditions a still higher temperature is needed, and for this purpose most establishments have a room with a temperature range of from 200°—250°, this is the so called "*Torridorium*," and although the heat is not sufficient to kill bacteria, it undoubtedly has a specific action on various morbid diatheses, and it is at this temperature that some of the best results of the bath have been attained.

The next move is to the shampooing-room, where the bather stretches out on a marble slab, and gives himself up into the hands of a manipulator, who effectually rubs and kneads, squeezes and percusses, wrings and manipulates his skin until the effete matter and worn out *débris* which has been brought to the surface by the opening and flooding of the pores forms in rolls upon his surface and is rapidly washed away. The process generally removes from one to three pounds of superfluous matter which had been clogging up the system. Shampooing is not the joint-cracking, neck-snapping and generally painful operation which so many imagine it to be. On the contrary, it is a thoroughly pleasant and enjoyable part of the programme, and a skilfull operator soon learns to graduate his muscular force to the requirements of the patient. After the manipulation is over, the bather is led to a shower bath, and thoroughly rinsed off with water at first warm and gradually made cooler, and then allowed the choice of either taking a plunge in a tank of cold water, large enough to swim in, or of first taking the Russian part of the bath, which consists in staying for awhile in a small room filled with hot steam, and following this with the cold plunge. It is not necessary to take the plunge at all, and the bather may merely cool off his body in order to avoid taking a cold when he goes out. After a brisk rub down the bather proceeds, enveloped in a sheet, to the *Frigidarium* or cooling room, where, resting on an easy couch and sipping a cup of coffee, he gradually dozes off into a refreshing slumber, where, in the words

of Bayard Taylor, "mind and body are drowned in delicious rest, and we no longer remember what we are; for gently sleep steals upon our senses; as gently the clouds dissipate, and we are born again into the world, and walk forth instinct with a new life."

The indications for the use of the Turkish bath are numerous, both as a prophylactic and as a means of cure. Physicians of eminence, both in this country and in Europe, have testified repeatedly as to its value in various ailments and diseased habits of body. I cannot give you a better idea of its usefulness in disease than to quote you a few of their public opinions on the subject.

Dr. Austin Flint says that, as a remedy for sleeplessness, it is better than bromides, chloral, or opiates. Dr. Lewis Sayre says that when the medical profession arrives at a thorough knowledge of the value of hot air baths, they will prescribe them more frequently, and medicines less, and be of more service to their patients. Dr. L. W. Thudichum, of London, thinks the Turkish bath, the most powerful and certain, and at the same time the safest and most agreeable therapeutic agent in existence. He says one can remove as much of the poisonous and effete matter from the body in one hour in a Turkish bath as can be removed by other means in twenty-four hours, and that it is a common experience, that persons who have been liable every winter to attacks of catarrh, bronchitis or neuralgia, acquire an almost perfect immunity by the regular use of the bath. Sir Benjamin Brodie, M.D., of London, says it is of great use in dyspeptic and gouty diatheses, and to those who lead inactive or sedentary lives. Professor Erasmus Wilson, says that in the Turkish bath the skin acquires color, freshness, firmness and elasticity; it loses the muddy and faded hues of ill-health, and the parched and wrinkled aspect of infirmity and age; and that it procures for the habitual bather exercise, health and life. Sir John Fife, M.D., of Edinburgh, who was the first to establish a bath in connection with a hospital, at the great Newcastle Infirmary, says that its effects are most remarkable in obviating disorders and palliating diseases of the liver and kidneys, the passage of gall stones and the relief of kidney obstructions often occurring almost immediately after the use of the bath.

I could give you much other testimony of the same character; but these quotations are sufficient to show you that many of the leading physicians of the world are firm believers in the therapeutic value of this agent. As far as my own personal experience and observation go, the indications for the use of the bath, seem to point most strongly to its use as a diaphoretic, a general tonic, and a febrifuge. It is roughly estimated that there are seven million pores opening on the surface of the skin. These are the vent holes, or sluice gates, for over twenty-five miles of drainage. To insure health, it is necessary that the greater part of this system of drainage should be in proper working order. If the sluice gates are blocked up, the waste matter must find an outlet in some other quarter, and naturally it permeates the tissues of the body, enters the blood current and produces diseases of various kinds. The Turkish bath, by opening the pores, by flushing and allowing free egress to this deleterious matter, cleanses the blood from impurities, gives an impetus to the circulation, and invigorates the entire organism. It is one of the best remedies I know of for relieving a "general cold," and it acts well as a mild febrifuge. I have reduced my own temperature a degree and a half when suffering with a slight fever, by a stay of about 20 minutes in the hot room. There are many instances on record, of ladies who on first entering the bath would not sweat below their waists, and who, by continuing its use, have procured a uniform opening and cleansing of the pores, followed by a general improvement of health, and disappearance of nervous and dyspeptic symptoms. In cases of chronic eczema, some most happy results have been reported from the continuous use of the Turkish bath. Unlike many rules the Turkish bath works both ways: it will reduce superfluous tissue, and, by its action in restoring the system to a normal condition, it will also increase the bodily weight. If time permitted, I could give many more instances of the remedial power of this great therapeutic agent, but I hope I have said sufficient to give you an idea of its power for good when rightly used under the directions of a competent medical adviser.

—The *Western Med. Reporter*, Dec., 1888, says that in a recent suit the Supreme Court of Indiana decided that unless damages are collected during the lifetime of the physician, they cannot be collected. No action for damages in a malpractice suit can be maintained after the death of the party sued.

SOCIETY REPORTS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, January 3, 1889.

The President, THOMAS M. DRYSDALE, M.D., in the chair.

DR. PARVIN presented the

Sexual Organs of a Young Girl,

and said that they are among several which he procured in Munich last summer for the purpose of teaching students practically many of the operations upon such organs by the method proposed and pursued by Prof. Winckel. His method is as follows: The organs being properly fastened within and upon Schultze's obstetric phantom, many of the more common operations can be done by the student as upon the living subject. This much was said to explain why he had no history of the subject from which the specimen was taken. In the specimen there is a very perfect annular hymen, one of the rarer forms of this structure, and its borders are quite regularly dentated. The bladder apparently has its walls somewhat thickened, though probably not really; but certainly they seem very thick in comparison with the uterine walls. These latter are so thin that there is in this regard a hypoplasia of the uterus, and thus a uterus membranaceus; but the organ in length and breadth seems fairly developed.

DR. PARVIN also presented

An Obstetrical Manikin.

He had the obstetric phantom made in Munich; it represents a design he had entertained for many years, in fact since the beginning of his obstetric teaching. He wished a complete human form, which could be put in the different positions a woman occupies in labor—natural, manual, and instrumental. The joints are sufficiently mobile to permit the model to be placed on the side or on the back, the limbs put in any position desired. The pelvis is of iron, covered with leather and has a movable coccyx; while the external parts are made of rubber which will dilate so as to admit the passage of a fœtus. The abdominal cavity is ample for the introduction of two fœtuses. One or both may be included in the rubber uterus designed by Prof. Winckel, and thus placed in that cavity. For the suggestion of a cast-iron pelvis, a model of the best one found in the Museum of the Munich *Frauenklinik*, I am indebted to Dr. J. Clifton Edgar, of N. Y., then a resident obstetrician in the *Klinik*. Dr. Edgar, who remained in Munich several weeks after I left, during his stay superintended the work, and doubtless I am indebted to his intelligent supervision, suggestion and direction for the successful manner in which the workman carried out the original design. The model will be useful in gynæcological as well as in obstetric teaching, in that the different positions in which the patient is placed in examinations and in operations can be readily and plainly illustrated. The only addition which it seems to me at present might be usefully made is a rubber abdominal wall, similar to that of Budin's well-known obstetric manikin.

DR. J. C. DA COSTA did not think that annular hymen is so very rare. He had seen some cases and among them one that was very marked. The woman had been married some two years, had been pregnant and had aborted at four or five months. Coitus was excessively painful both to the husband and to the wife, and in the wife was frequently followed by attacks resembling epilepsy. The hymen was annular, smooth, unbroken and elastic, grasping the finger when introduced, like a firm rubber ring. Cutting the hymen cured all the trouble, both of husband and wife.

DR. KELLY remarked that the condition of the hymen is a subject of much interest, about which many erroneous views prevail. It was by no means uniformly ruptured by coitus. In other cases coitus alone was as capable as numerous pregnancies of obliterating all traces of the hymen. He had made many observations and careful drawings of a number of cases, which showed a definite relation between a certain condition of the hymen and the severity of a preceding labor; that is, when the vaginal outlet has been broken down, with extensive laceration, the hymen remained *intact* except at the split posteriorly, being saved by the vaginal tear. On the contrary, the surest way of thoroughly destroying the integrity of the hymen is the equable, all-around dilatation of a *normal* labor. In a forceps case, examined some months after labor, the hymen, elsewhere intact, was as cleanly cut into halves as a lacerated cervix. It is unquestionably, as Budin has shown, the pointing terminus of the vaginal canal.

Dr. B. C. Hirst showed a specimen of

Endometritis Gravidarum Polyposa

from the University Museum. There are in the Museum two other examples of the same condition, one recently contributed by Dr. R. Deaver, of Germantown. In the last case the embryo was certainly not over three weeks old; the ovum corresponded to the third month and had been retained in the uterus some six months after the death of the embryo. They are all very good specimens of a very rare disease.

He also showed a

Pregnant Uterus

removed from a woman with chronic nephritis, who died suddenly from apoplexy within three months of term. She had been blind for three weeks before her admission to the hospital, and was œdematous in face and extremities. As soon as his attention was called to the case, he ordered premature labor to be induced, but before this could be done the woman died. The uterus showed on abdominal palpation an apparent right lateral version. On opening the abdomen this was seen to be due to the attitude of the fœtus—vertex presentation, L. O. A. The uterine body extended equally to both sides of the median line, but had not the pyriform shape supposed to be characteristic of the pregnant organ. It was irregularly triangular in form, the base of the figure being to the right side, the apex to the left. This would give one the impression on abdominal palpation of right lateral version, from the fact that the highest point of the uterine fundus was to the right side; but this point corresponded to that angle of the uterine cavity on which lay the trunk and extremities of the fœtus.

Dr. Hirst then read the following:

M. M., 39 years old, widow; has had four children; youngest six years old. Six weeks ago the patient attempted to lift a heavy weight, and was immediately seized with sharp pains in the left groin. This occurred just at the commencement of a menstrual flow, which was unusually profuse and painful. The bleeding had in fact continued until the present time (Nov. 8). On this day the woman came by a rather long horse-car journey to the Philadelphia Hospital, to visit her daughter, a patient in the wards; in the hospital she was suddenly seized with great pain and sank to the ground from weakness. She was carried to the medical wards where an examination showed some form of pelvic or abdominal tumor. She was consequently transferred to the gynecological floor. A vaginal examination showed a mass of considerable extent to the left of the uterus, and apparently a cystic tumor in Douglas's pouch. Laparotomy was done the next morning. As soon as the peritoneum was cut through, a large quantity of dark-colored blood welled out of the opening. The incision was enlarged, the intestines turned out and wrapped in warm towels, a pint or more of blood sponged out, and a careful examination made by inspection and touch. The left broad ligament was distended by a tumor, made up, as far as he could tell, of clotted blood; near the uterus there was a ragged opening into which he could put the tip of his little finger. During the half-hour the abdomen remained open there was no hemorrhage from this spot, and had evidently been none recently, for there was no fresh blood in the abdominal cavity. His diagnosis, naturally enough, was ruptured tubal pregnancy. As the embryo, if one existed, was too small to give future trouble, and would be absorbed, he simply cleaned the abdominal cavity, picked adherent clots off the intestines and closed the wound without drainage. The convalescence was entirely favorable. He has been inclined since to alter the diagnosis. The woman, on close questioning, absolutely denied the possibility of impregnation. This fact, together with the history of great muscular effort at the beginning of a menstrual period, and the subsequent behavior of the patient, would naturally suggest the possibility of a rupture of a blood-vessel in the broad ligament. The acute attack of pain and weakness two days before the operation might be explained by a rupture of the peritoneal covering of the effused blood, with an escape of clots and a fresh hemorrhage into the peritoneal cavity.

The following officers were then elected: *President*, Theophilus Parvin, M.D.; *Vice Presidents*, W. H. H. Githens, M.D., and J. C. DaCosta, M.D.; *Secretary*, J. M. Baldy, M.D.; *Treasurer*, Alfred Whelen, M.D.

—A chemist named Halffpap, who practised medicine under cover of a fictitious American diploma, is said by the *Bulletin Medical*, Dec. 30, 1888, to have been sentenced to imprisonment for two years on the charge of homicide. It seems that he prescribed for an infant two months old, suffering with convulsions, one-sixth of a grain of morphine, to be repeated every two hours.

NEW YORK ACADEMY OF MEDICINE.

Meeting of January 3, 1889.

The President, A. JACOBI, M.D., in the Chair.

The annual reports of officers and committees were read, and an oil portrait of the late Dr. Samuel Purdy, was accepted with thanks. Dr. John C. Peters read a memorial of him.

DR. MALCOLM MCLEAN read a paper on

Intra-Uterine Cry after Expulsion of the Waters,

in response to the President's call for the narration of interesting cases. He stated that in August last he was asked to assist Dr. Tracy in delivering a woman at term. Dr. McLean had attended her in four previous normal confinements. On this occasion the occiput was in the posterior position, and while he was trying to rotate the head forward with his hand the nurse drew the patient into a hollow in the bed, whereupon the abdominal organs receded from the pelvis, air rushed into the vagina and uterus, and immediately the child began to cry. The crying continued while he rotated the head, applied the forceps, and extracted, or during about five minutes. It was somewhat remarkable that material was not insufflated, interfering with breathing. The case, he believed, was unique.

The following named members were elected to office: *President*, Dr. A. L. Loomis; *Vice-President*, Dr. D. B. St. John Roosa; *Recording Secretary*, Dr. A. M. Jacobus; *Corresponding Secretary*, Dr. M. A. Starr; *Treasurer*, Dr. O. B. Douglas; *Trustee*, Dr. A. Jacobi; *Treasurer for the Trustees*, Dr. F. A. Castle; *Member of Committee on Admissions*, Dr. Robert Abbe; *Member of Committee on Library*, Dr. E. S. Peck. Five delegates were elected to the State Medical Society.

Stated Meeting, January 17, 1889.

The President, A. JACOBI, M.D., in the Chair.

DR. PAUL GIBIER, of Paris, read a paper entitled:

Yellow Fever; Experimental Researches on its Etiology,

in which he gave a *résumé* of his researches in Florida, instituted under the direction of the government of the French Republic. These experiments were a continuation of certain investigations into the etiology of yellow fever which he had formerly made and reported, once in a paper and again in a lecture, before the Academy of Medicine, Paris.

When he arrived in Jacksonville, Florida, the severity of the epidemic was diminishing. Yet a few cases which he had an opportunity to study and to make bacteriological observations upon were undoubtedly of yellow fever. In one instance especially the symptoms and the pathological lesions were distinctly those of yellow fever. The disease terminated fatally on the fourth day. The intestines contained a large quantity of black liquid, which was alkaline, while the contents of the stomach were acid. This fact is noticeable inasmuch as the bacterium to which he has ascribed the origin of typhoid fever existed only in the intestinal contents; acid fluids would destroy it. In this case, as in all others, this microbe was absent from the blood, liver, spleen, and kidneys. If this microbe is the cause of yellow fever, its absence from the intestines in some cases may be accounted for by the fact, which is well known, that when a culture medium becomes saturated with it its growth stops, and if then another bacterium is introduced it will displace the former. It is his intention, as soon as opportunity presents, to examine the dejecta in a number of cases from the beginning of the disease; and he would not be surprised, he said, if the microbe were present only during the first days of the disease. The theory which he has supported is that yellow fever is an intestinal disease, due to a microbe, and that it must be treated with disinfectants directed to the intestinal tract—such as bichloride of mercury, naphthalin, and tannic acid. The microbes are the origin of certain poisonous ptomaines which enter the circulation and give rise to certain symptoms.

DR. L. D. BULKLEY read a paper on

Unusual Methods of Acquiring Syphilis, with Reports of Cases.

The subject, he said, is a vast one, and could not be fully covered in one paper. He called attention to a few of the innocent methods by which syphilis is acquired, methods which commonly are wholly unsuspected and unprovided against.

When non-venereal methods of acquiring the disease are generally recognized, its dangers will become more apparent and be better guarded against; syphilis

will then also be oftener recognized by the patient and physician when there is no history of venereal exposure, and less stigma will be attached to it. As a result of this, syphilis will be placed where it belongs, among the infectious diseases, and will be placed under the care of health authorities who will aid in stamping out a malady which has caused untold misery both to those guilty and those innocent of sexual transgression.

The relative frequency of the different modes of acquiring the affection is not generally appreciated. Literature contains accounts of dozens of epidemics during which thousands have acquired the disease. There are also reports of cases in which thousands have been infected with the disease in ways hardly suspected before. Fournier has recently declared, from a study of his cases, that in about twenty-five per cent. of all cases of syphilis in females the disease is innocently acquired, and during the discussion of his paper Ricord stated that his experience fully corroborated Fournier's statement.

Dr. Bulkley stated that in looking over the more or less complete records of his cases, numbering something more than 1500, he had found that the larger proportion came under care after the primary sore had disappeared, and in a large number there was no account of the primary lesion or character of the infection. Yet among the 1500 cases notes of extra-genital chancre occurred in 65 instances, or in four and three-tenths per cent. In most of these instances the disease had been acquired in an innocent manner. Thirty-four of the 65 cases were in males and 31 in females. The disease occurred in females in one-third of the whole number of his cases and of these cases it was hereditary in ten per cent.; in the larger share of the rest of the cases the disease seemed to have been acquired in an innocent and unsuspected manner. It was safe to say that in forty per cent. of his cases seen in private practice syphilis had been acquired innocently and undeservedly.

Of his 65 cases of extra-genital chancre, the location of the chancre was on the lip in 30, on the finger in 7, on the breast in 6, on the tonsil in 5, on the tongue in 5, on the cheek in 3, on the chin in 2, on the eyelid in 2, on the nose, ear, hand, forearm, and sacral region in one each.

The unusual methods of acquiring syphilis, or those other than by venereal contact, he classed under three grand groups, which permitted again of numerous subdivisions. The first was syphilis economica, in which, in the ordinary economic or domestic relations, the disease was transmitted innocently. Second, syphilis blephatrophica, in which the disease was acquired by or through infants. Third, syphilis technica, in which it came from body service.

He subdivided syphilis economica into three sub-groups: syphilis by domestic, industrial, and personal transmission. Of domestic transmission, that by means of spoons, forks, knives, jugs, tobacco pipes, is familiar. The author recited one case in his own practice of transmission through the tobacco pipe. Other methods are through wearing apparel, such as shirts and pantaloons. He cited an interesting case in which the chancre was contracted in the sacral region by the wearing of a public bathing suit.

Beds, toilet articles, sponges, toothbrushes, etc., have transmitted the disease. In one of his cases it seemed altogether probable that chancre of the tongue had been caused by pins, which the girl was in the habit of putting into one side of the mouth. It is rather remarkable, he said, that he had failed to find a single authenticated instance of syphilis being acquired in public urinals. Under industrial transmission, he stated that numerous cases had been recorded in which the disease was transmitted through common use of a glass-blower. Not a case had been found in which the disease was attributed to handling paper money. It is commonly supposed laundresses frequently acquire the disease in washing soiled linen of syphilitics, but this mode of transmission has not been proved.

Personal transmission is common, and next to the venereal act, kissing is probably the most common mode of communicating the disease. Dr. Bulkley cited one case in which a man transmitted the disease by kissing the lady to whom he was engaged, and this was the cause of breaking of the engagement; the man soon married another girl, and she acquired the disease in the same manner, that is, by kissing. In one instance a lady gave the disease to a lady friend by kissing.

Many cases have been recorded of transmission of syphilis through nursing and attendance on infants. An instance is recorded in which over forty women and children were infected from one syphilitic child. Individual instances are still common. Of his own 65 cases of extra-genital chancre, 6 were on the breast. Children

sometimes infect attendants and attendants sometimes infect children.

The third great branch, syphilis technica, includes cases in which the operator is the victim; cases in which he, not having the disease, is yet the means of conveying the poison to others, and also includes those in which he is the direct medium. The author cites one instance in which the surgeon acquired a chancre on the finger, and then, notwithstanding his precautions, conveyed syphilis to his wife. There are cases in which, during an examination, the surgeon has got the virus upon the uninjured finger, then scratched the eyelid or other portion of the face, and there a chancre has developed. More than one instance has been recorded in which the patient has projected the virus while coughing, and thus infected the medical attendant. There are a number of instances of syphilis being conveyed to the eye by quacks attempting to remove a foreign body from the eye with the tongue. One of Dr. Bulkley's cases came from tattooing. Cases in which the physician has been the medium of infection were seen in syphilis contracted from vaccination, during ritual circumcision, wetcupping, ordinary surgical operations, in dentistry, etc.

The question of prevention of syphilis is one which should receive the best attention of physicians and of the community.

Dr. S. W. Hubbard cited a case in which an infant acquired syphilis from the nurse when the latter had no lesion on the body, and he expressed the belief that the disease was transmitted through the milk.

Dr. Bulkley, being asked if he thought milk could transmit syphilis, expressed himself in the negative.

The President remarked that milk from the healthy mother is a seeretion, composed mostly of transformed epithelium, while that from one in reduced health is a transudation, composed largely of blood serum and the poisons of the blood which it may carry, and hence it is capable of transmitting syphilis.

—The Empress Augusta has offered, in connection with the German Society of the Red Cross, a prize of $2,500 for the best portable military hospital. The award will be made at an exhibition to be held in Berlin, in June. Prizes will also be given for the best collection of medicines or surgical instruments. All countries are invited to exhibit.

PERISCOPE.

A Few Points in Macewen's Operation for Radical Cure of Hernia.

In a paper on this subject in the *Boston Med. and Surg. Journal*, Dec. 6, 1888, Dr. Herbert L. Burrell says that the indications which have governed him in advising the operation have been the existence of hernia uncontrollable by truss, or rendered painful by truss, or, as in one case, coincident mental depression. In discussing the technique of the operation, he takes it up in sections. He then speaks as follows:

1. The finding of the sac. In performing this operation, the strictest of antiseptic precautions have been attempted, but unfortunately have not always been successfully carried out. The patient having been thoroughly anæsthetized, an incision of two or two and a half inches has been made directly over the external abdominal ring, great care being exercised to bring the incision directly over the middle of the lozenge-shaped opening and running in its direction. Then I have carefully avoided attempting to isolate the different layers which are ordinarily distinguished as covering a hernia. This I have done by having an assistant take a pair of anatomical dissecting forceps, and I have taken another, and then deliberately we have carefully divided every structure for the whole length of the incision that we have met, the assistant carefully grasping the new structure to be divided in the very depth of the incision, and I grasping the tissue directly opposite to him, and then between the two forceps I have divided the elevated layer of tissue. In this way I go on until I meet a rather thick white layer, which on being divided shows that I have entered a cavity, when I know that the sac has been reached. I never attempt to isolate the sac without opening it, for the recognition of the cavity of the sac is its distinguishing point. Therefore the whole attention of the surgeon should be devoted, from the time that he makes the primary incision in the skin, to the finding of the sac. By this means I feel that I have been enabled to save time.

If I cannot readily distinguish the sac, I allow the patient partially to recover from the ether, and very quickly the sac is distended.

2. The isolation of the sac. When I recognize that I am in the sac, from this time on I prepare it for restoration to the abdominal cavity. Should I find it adher-

ent, as so commonly occurs, I fill the sac, through the small opening that I have made in it, with iodoform gauze, distending it, in the same fashion that a mending-ball does the heel of a stocking. Having accomplished this, there is not the slightest difficulty in dissecting out, with the point of a knife or the handle of a scalpel, the distended sac, and separating it from the cord and its accompanying vessels.

When, however, the sac is filled with omentum, implanted directly on and about the testicle, as it was in one of the congenital cases operated upon, one has a difficult, tedious dissection before him to separate it carefully from the testicle and return it to the peritoneal cavity. Occasionally I have had to divide the omentum into various parts and return the carefully secured ends to the peritoneal cavity.

When one has a congenital hernia to deal with, the simplest way, after carefully exposing the sac, is to fill the processus vaginalis with the "iodoform gauze darning-ball," and then to divide the sac into two parts, forming a distinct tunica vaginalis for the testicle, and then sewing up the proximal part of the sac and returning it to the abdominal cavity.

3. The troublesome hemorrhage and the manipulation of the tissues. In the first few cases that I did I had considerable difficulty in identifying the sac, and hence I had once a troublesome hemorrhage from the vessels that accompany the cord. Further, in pulling on the different structures to make them out, I did an amount of damage to their vitality which should be avoided. In two of the cases I feel quite sure that the manipulation of the tissues, especially the dragging of the testicle out of the scrotum, had much to do with the formation of scrotal abscesses. This I believe can be avoided by the "darning-ball of iodoform gauze."

4. The introduction of the sutures. I can only say that I have tried almost all of the different patterns and forms of needles, and have found that I could place the stitches more accurately, and this is really one of the most important points in the whole operation, by a Hagedorn needle in a good needle-holder. I have, after carefully separating the sac the whole length of the inguinal canal and for a half an inch around the intra-abdominal surface of the internal ring, placed a stitch in the very extremity of the sac and transfixed it through and through, and brought it out, after traversing the inguinal canal, through the muscles of the abdomen, pulling up the sac inside the abdomen; the suture pulling up the sac in the same way that a Venetian blind is raised. This suture is not fastened in position until the end of the operation, its protruding extremity being caught in position on the abdominal muscles by a pair of pressure forceps. Then I carefully attempt to restore the valve-like form of the inguinal canal by stitching the conjoined tendon with strong silk or stout catgut to the aponeurotic structures of the transversalis, internal and external oblique. I usually place two, if not three, sutures in position, and as I tie them, have the assistant introduce his finger in the canal, and he can then determine how tightly I bring the parts together, and I run no danger of cutting off the circulation in the cord.

5. Dressing. I always consider that the point where the operation proper is finished and the dressing begins is when I have tied the last suture which closes the inguinal canal. Of course, strictly speaking, this is not the case, but it serves to emphasize the importance of the foregoing procedures.

I have in the last cases closed the opening completely, and have not used any drainage-tube; of course this means that I have had to take a great deal of time in carefully rendering the wound perfectly free from fluids. A thorough and effective flushing at the end of the operation of the whole surface of the wound with 1-1000 corrosive sublimate is, I believe, of the greatest importance. The wound is superficially closed with a continuous catgut suture. The dressing proper is applied as follows: six sterilized gauze pads 6x8x½ are superimposed, covering the wound surface and the scroto-femoral cleft; this is held in place by a carefully applied gauze bandage four inches in width, just enough being used to steady the dressing in place. Over this is laid a piece of Macintosh, with a hole in it large enough for the penis to protrude; then this is covered in by sterilized sheet-wadding.

This is secured in position by a cravat gauze bandage six inches in width and long enough to form a double spica bandage. Over this is placed another piece of Macintosh, with a hole in it for the penis, and this is secured in position by two safety pins placed on either side of the penis and at various other points on the abdomen and thighs as may be found necessary.

6. The question of the necessity of a truss. There can be but little doubt that

the wearing of an ordinary truss after a hernia operation is open to the objection that pressure on cicatricial tissue is usually followed by gradual absorption. I have never felt quite safe in recommending the entire neglect of a truss in the after treatment of this operation, and have therefore been led to use a worsted truss in much the same way that is recommended by Pye. This does not exert any undue pressure on the cicatricial tissue.

These are a few of the points that I have found of interest in performing the operation, and I can only say that they have been derived not alone from my own experience, but from that of my colleagues.

Relation of Acetonuria to Diabetic Coma.

Before the Royal Medical and Chirurgical Society of London, Nov. 27, 1888, Dr. Samuel West read a paper on acetonuria and its relation to diabetic coma, of which the following is an abstract. The relation of acetonuria to diabetic coma had been investigated by experiment and by clinical observation, and this paper was a contribution to the clinical side of the problem. The results of experiment were briefly referred to, and the conclusion to which they led. Clinical observation was for a long time difficult from the want of trustworthy tests. A short account of the chief ones was given: 1. Lieben's iodoform test. 2. Gunning's and Le Nobel's modification of it. 3. Reynolds' test. 4. Legal's test with nitro-prusside of potassium. 5. Le Nobel's modification of it. 6. Penzold's test. Legal's test was found to be the most convenient for use in the urine direct, and Lieben's in the distillate, but this reaction was also obtained if alcohol was present. But if the urine gave Legal's, and the distillate both Legal's and Lieben's tests, the presence of acetone might be accepted. As control experiments two series of convalescent cases were examined. In the first thirty cases, a doubtful Legal's reaction was obtained in three. In the only urine which was distilled neither test was obtained in the distillate. In the second series of about the same number no evidence of acetone was obtained in any. Of non-diabetic patients actually suffering from illnesses at the time of examination, acetone was found in fifteen cases. Acetonuria is therefore very rare in healthy or convalescent persons, but common in various forms of acute and chronic disease. Of diabetic patients fourteen were examined, four being at the time comatose. In some of these cases the examination was continued for many days. The following conclusions were arrived at: 1. Acetonuria is common in diabetics without coma. 2. It is not constantly present in cases of diabetic coma. 3. It varies greatly in the same case from time to time without definite cause. 4. It varies independently of variations in the amount of sugar, specific gravity, etc. 5. It may even disappear when coma develops. The iron reaction shows also no relation either to coma or to acetone. Experiment and clinical observation therefore lead to the same conclusion, viz., that acetone can not be the cause of diabetic coma. Clinical observation, however, seems to show that acetonuria has a clinical value as indicating that the patient is in a more critical condition than when it is absent. The symptoms of diabetic coma depend, in all probability, upon acute intoxication by some substance rapidly generated within the body, but at present unknown. It may be that in the perverted chemical processes which develop it, acetone and the allied body giving the iron reaction are produced, so that the presence of these bodies in the urine may serve as "danger signals."

Dr. Maguire said that acetone is evidently not the poison which produces diabetic coma; nevertheless, the condition is undoubtedly due to the presence of a poison. The liver either may split it up or the kidneys eliminate it, so that, although it may be found in the blood, serious symptoms may not develop. He looks upon the presence of albuminuria as a valuable danger signal when occurring in the course of diabetic coma, its presence being probably due to renal irritation. In every case he has examined, the kidneys have presented extreme parenchymatous inflammation, and such a condition can be brought about by the injection of diacetic ether or acetone into the blood. He thinks that, if albumin is found after acetone has been ascertained to be present, the case is graver than if acetone is found alone.

Dr. Angel Money has on two occasions found hyaline necrosis in the kidneys from cases of diabetic coma. The iron reaction is a sign of danger, and he has never failed to find it when the knee jerk is absent. Albumin is generally present in fatal cases.

Dr. West replied that albumin, like acetone, is by no means a constant phenomenon in fatal cases, and therefore may or may not be a "danger signal."—*Lancet*, Dec. 1, 1888.

The Removal of Hook-Shaped Foreign Bodies.

One of the most acute of American physicians, Dr. Morrill Wyman, of Cambridge, Massachusetts, is reputed to have once relieved a small boy of a fish-hook that he had swallowed by the clever device of slipping a perforated bullet over the line, which fortunately was hanging from the boy's mouth, causing him to swallow the bullet, and then drawing upon the line, the bullet guarding the tissues against injury from the hook during the process of extraction. But the small boy, owing doubtless to the special Providence that watches over him, rarely feeds on fish-hooks, so that Dr. Wyman's expedient, ingenious as it was, is more likely to be handed down in anecdote than to serve as a precedent in actual practice. Most of us are not in pressing need of a device for removing fish-hooks from the stomach—not so much, indeed, as of a trick for enticing hairpins from the urethra—but it happens now and then to almost every practitioner to find himself face to face with the task of disengaging some hook-shaped body that has become imbedded in the tissues. In such a case M. Le Fort, of the Necker Hospital, Paris, lately made use of a procedure which we find detailed in a clinical lecture published in the *Union Médicale* for October 18. The manipulation, however complicated it may seem at first thought when described as *par version, bascule et propulsion* was really very simple. Undoubtedly it has been resorted to by many practitioners, for it would suggest itself at once to a man of ordinary ingenuity; but, as we do not remember to have seen it described in print, we think it may prove of interest to our readers.

The patient was a lad who, nine months before his admission into the hospital, had been struck upon the cheek by a person who held a button-hook in the hand with which the blow was given. The pain of the blow was very great, and the lad at once perceived that the person who had struck him now held only the handle of the button-hook. There was a punctured wound of the cheek, from which a free flow of blood took place, situated in front of the masseter muscle and at the level of the lower teeth. An hour afterward there was considerable swelling of the cheek, and on the following morning, the swelling being persistent and accompanied with rather sharp pain, a pharmacist was consulted, who, as the patient said, "corked up the hole in his cheek." At the end of two or three days the wound had healed and the swelling had subsided, but there was some induration perceptible to the patient, who, however, felt no further pain and no embarrassment of the movements of the jaw. This quiescent state of things continued until about a month before the lad's admission into the hospital, when an inflammatory redness appeared at the site of the wound, and an opening formed from which a little shaft of iron protruded to the extent of about a third of an inch. The hooked extremity was directed backward, and was so engaged in the masseter muscle as not to admit of removal by direct traction without great risk of serious injury. Having enlarged the opening by a slight cut, M. Le Fort depressed the presenting end of the piece of iron and gradually worked it backward until he had reversed its original position. The hooked end now lay forward, and was easily made to emerge from the wound. Reference was made also to a somewhat similar case in which, some years before, M. Le Fort had extracted from a lady's hand a hook-shaped English implement for drawing corks.—*N. Y. Medical Journal*, Dec. 22, 1888.

Abscess of both Testicles Consequent on Urethral and Prostatic Irritation.

Mr. J. Newton Burns reports a case of abscess of both testicles consequent on urethral and prostatic irritation, in the *British Med. Journal*, Nov. 3, 1888. As abscess of the testicle, except in connection with tubercular or scrofulous disease, seems to be rare, he thinks the following notes of abscess of both testicles may be of interest.

Until a week before Mr. Burns saw him, the patient, a hale man 72 years old, had not suffered from any disorder of the genito-urinary apparatus. During that week he had frequency of micturition, and was found by Mr. Burns with bladder distended above the umbilicus. Examination *per rectum* revealed an enlarged and tender prostate. A prostatic catheter was passed with difficulty, and the bladder emptied of over two quarts of smoky urine, mixed toward the end with bright blood and mucus. Catheterization was continued for several days. When the prostatic region became less tender and swollen, and it became possible to pass the ordinary rubber catheter, this was regularly used night and morning by the patient himself. All vesical irritation ceased after washings out with antiseptics, and the patient soon regained health and

strength, though he still continued the use of the rubber catheter.

About a month after Mr. Burns's first visit he received an urgent call, and found the patient in great agony, with his left testicle very much swollen, hot, and tender in the region of the epididymis. At first the enlarged testicle could be distinctly felt at the bottom of the scrotum, but it gradually became indistinguishable from the surrounding infiltrated tissues. The exudation into the skin and tissues overlying the testicle rapidly increased, and in about twenty-four hours the testicle measured twenty inches in circumference.

The usual treatment soon alleviated his distress, and in a few days the measurement was reduced to sixteen and then to twelve inches. Signs of abscess having developed, a free incision was made, and about four drachms of pus and black blood were evacuated. The cavity was then irrigated with water containing a few drops of liniment of iodine, and healed in about ten days. Six weeks later Mr. Burns treated by the same means a similar affection of his right testicle, which, as in the former instance, got well. Both testicles returned to their normal size.

Hill-Climbing for Heart-Disease.

At the seventh Congress for Internal Medicine, held this year at Wiesbaden, an animated discussion took place on Oertel's treatment of chronic diseases of the heart by diet and exercise. Briefly stated, Oertel's aim is to strengthen the heart-muscle by a course of heart-athletics—*e. g.*, hill-climbing, the steepness of the paths being carefully graduated to suit the condition of the patients. In addition, he endeavors to lighten the work of the heart by limiting the amount of fluids supplied to the system and promoting their elimination. He puts great stress on the amelioration of the watery condition of the blood as being an important item in the treatment. In compensatory hypertrophy and dilatation, in acute diseases of the heart-muscle following on sclerosis of the coronary arteries or hæmorrhagic infarct, in myomalacia, and in cases of aneurysm of the heart, the "dietetic-mechanic" method is contra-indicated. In conclusion, Oertel gives the result of three years of his method at Meran, Ischl, Reichenhall, Liebenstein, Abbazia, Baden-Baden, Kreuth, and Wildbad. These results are necessarily valuable, independently of all theories, and are as follows: 1. In cases of fatty heart in elderly people, where there is no perceptible sclerosis of the coronary arteries, and where there is serous plethora, turgid veins, and frequently œdema, the results have been decidedly favorable. 2. Re-establishment of lost compensation and compensatory hypertrophy in valvular lesions, and in impediments of the pulmonary circulation due to diseases of the spinal column. 3. Recovery of the heart-muscle from extensive dilatation (in so far as non-compensatory) following weakness of the heart-muscle, and when caused by heightened intra-cardial blood-pressure due to valve lesions. 4. The best possible balance restored between the arterial and venous systems, decrease of the cyanosis, of the plethora of serum, and of the watery and even œdematous condition of the tissues. 5. Abatement and complete disappearance of the respiratory disturbances.—*Medical Chronicle*, Sept., 1888.

Fœtal Blood at Birth.

Dr. Scherenziss, of Dorpat, has published some interesting observations on the condition of the blood at birth. The specific gravity is, he finds, markedly lower than that of the blood in the adult. The hæmoglobin is also much less than in adult blood, the proportion being 76.8 to 100. The amount of fibrin is only about two-sevenths of that in the blood of the mother. Fœtal blood cannot be analyzed quantitatively by washing with saline solutions, a large part of the constituents of the corpuscles which appear to be in a very loose state of combination, especially the hæmoglobin, going over in the filtrate. Fœtal blood is richer in saline matters than the blood of adults, especially in insoluble salts. The sodium salts are somewhat greater in amount than in the blood of adults, but the potassium salts decidedly less. The sex and the weight of the child appear to have no influence on the quantitative constitution of the blood at birth.—*Lancet*, Nov. 24, 1888.

Frequency of Cancer of the Larynx.

B. Grimme (Inaugural Dissertation, Munich, 1888) states that he has found 15 cases of cancer of the larynx in a total of 13,517 autopsies, a percentage of .11; or, deducting two doubtful cases, .09 per cent. Seven of these fifteen cases were primary, seven secondary, and one doubtful. Epithelial cancer preponderated. The male sex was most frequently affected, in the ages from 40 to 49 and 60 to 69.—*Schmidt's Jahrbücher*, Nov. 15, 1888.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterise communications intended for publication.

STATE BOARD OF MEDICAL EXAMINERS.

Probably no single movement of medical progress in our country, within the last decade, has been so marked as the steps taken by several of our States in regard to the requisitions for practising medicine within their boundaries. It is somewhat remarkable that this reform should have commenced, not where one would most naturally have looked for it—in Pennsylvania, New York, or Massachusetts, the old centres of medical instruction—but in some of the more youthful and vigorous members of the Union—Illinois, Ohio, Minnesota, California, and others. These States have set a good example in the legislative enactments which they have made to regulate the practice of the healing art.

For years we have been impressed with the importance of a change in the general methods of licensing practitioners of medicine in this country, simply upon the guarantee afforded by the possession of a *diploma*. Along with many others, we have realized the utter inadequacy of such a certificate. To put the matter in its most favorable light, suppose the diploma to be issued from one of the first-class schools in the land, one where scrupulous care is exercised in the admission of matriculates, where a three years' graded course is required, and where the branches taught even exceed the traditional "seven," is it not a matter of common observation that a student may manage to pass his final examination, and obtain his diploma without any real, practical understanding of his professional duties? If this is true of our best schools, how much worse is the case in those which do not deserve this designation?

As already intimated, we have long been in favor of having a State Board of Examiners to determine the proficiency of the students of the different medical schools of the State, before conferring on them the right to practise medicine. In other words, transferring the licensing power from the professors or instructors in medical schools to an entirely independent Board of qualified and experienced practitioners of medicine.

An obstacle to this plan, often cited, is the difficulty of an amicable arrangement between the various schools of medicine, both as to the manner of appointing the Board of Examiners, and as to the examination of candidates. This difficulty is a very real one and requires wisdom and discretion in dealing with it. Just here, there are certain established principles not to be lost sight of. The law places all medical systems as on a perfect equality, and it cannot be expected to make any distinction between

the graduates of a regular college and those of the homœopathic medical schools. To attempt to exclude candidates from any of the latter from the privileges of examination for a license to practise when their schools are recognized by the very State which creates the Board of Examiners would be unreasonable. The only feasible plan would be to open the examination freely to all who may wish to apply, with the understanding that the subjects for examination would include those taught in the most advanced regular schools.

This is essentially the plan pursued by the Army and Navy Boards. The point to be ascertained is whether the candidates can satisfactorily answer the questions propounded to them by the Board.

A Bill on this subject is now before the Legislature of Pennsylvania. As may be supposed, it has its warm advocates and its strong opponents. But from the powerful testimony brought from those States that have adopted the plan of State Examining Boards as to the uniform good results produced by their operation, both in diminishing the number of incompetent practitioners in the State and in elevating the standard of medicine, we have little doubt of the feasibility of the Act contemplated for our own State, and we hope for its speedy adoption.

TREATMENT OF DIPHTHERIA.

The treatment of diphtheria presents one of the most serious problems which confront the medical man. For years the methods in vogue have been of the most heroic sort; forcible removal of the membrane, active cauterization, and the administration of drugs often most repugnant to the palate and sometimes dangerous to life. Of late there has been a growing tendency to adopt the teaching of Oertel that violent local treatment is useless and dangerous, and less confidence is placed in the virtues of chlorate of potash. Mild local applications like that of lime water or solutions of papayotin have to a great extent taken the place of nitrate of silver and mineral acids, which were once regarded as almost indispensable.

We have already, at different times, called attention in the REPORTER to methods of treating diphtheria which were free from the objections to which some of the older methods are open, and which have already proved of value under our own observation, or that of other practitioners. We now call attention to another which is exceedingly simple, and has proved useful elsewhere.

This method is strongly recommended by Dr. C. Lorey, of Frankfort-on-the-Main, in the *Deutsche med. Wochenschrift*, Nov. 15, 1888, and has been referred to at some length in the letter of our Berlin correspondent, in the REPORTER, Dec. 22, 1888. It consists in insufflation of finely powdered sugar. It is carried out with a tube preferably of glass—charged with pulverized sugar, and armed with a rubber ball, compression of which propels the sugar against the fauces.

Dr. Lorey has used this method in eighty cases, in patients both old and young, and in all forms and grades of the disease. In his hands it has brought about a notable shortening of the duration and limitation of the extent of the disease process, diminution of the foul odor, and loosening and removal of the membrane.

If such results can be obtained with an agent which is absolutely harmless, and by no means unpleasant, the fact deserves careful attention from medical men everywhere, and, in considering it, it is proper to note that Dr. Leroy advises accompanying the local treatment with the administration of a mixture containing from three-quarters of a grain to a grain and a half of apomorphin in three and a half fluid ounces of menstruum, of which a teaspoonful would contain about one-twentieth of a grain. When the acute stage is passed he gives tincture of the chloride of iron with glycerine.

ALEXANDER'S OPERATION.

Shortening the round ligaments, is one of the various methods of treating retroversion, retroflexion, and prolapse of the uterus. It was first done on the living subject by Alexander, and appears to the student both logical and based on correct anatomical principles. Its claim to validity, however, has been more vigorously assailed perhaps than that of any other operative procedure. Both those who deny the importance of versions and flexions, and those who maintain the importance of these displacements, alike contend that by the use of pessaries all needful aid can be rendered, and therefore they condemn the operation as unnecessary. Those who oppose operative procedures in general condemn this operation on account of its supposed dangers, and also, with considerable justice, because operators have sometimes failed to find and draw out the round ligaments. Others have opposed the method on the ground that the principles upon which it is based are wrong; that retroversion, retroflexion, and prolapse of the uterus depend primarily on relaxation of the utero-sacral ligaments, or on relaxation or laceration of the supporting segment of the pelvic floor, or on both; and therefore, since shortening the round ligaments cannot remedy any of these conditions, they assert that a permanent cure cannot be produced by Alexander's operation.

In a conservative and valuable paper read before the Medical Society of the County of New York, Oct. 22, 1888, and abstracted in the REPORTER, Nov. 10, Dr. Mundé discusses the status, indications, limitations, and technique of this operation, and reports his experience with it. He considers that the round ligaments can always be found and drawn out, and the uterus thereby anteverted and elevated, whenever the fundus uteri is not bound down by adhesions, and the ligaments possess their normal play in the inguinal canal.

The principal field for Alexander's operation is in the cure of long-standing cases of retroversion or retroflexion of the uterus, especially when the displacement is associated with descensus, or actual prolapse, of that organ and more or less protrusion of the vaginal walls, together with the bladder and rectum; in other words, when the pelvic floor is either injured or relaxed beyond non-operative restoration. It is taken for granted that treatment by pessaries has been tried and has failed. Alexander's operation is not indicated in cases of backward displacement, or descensus of the womb of moderate degree, as these are comfortably managed by vaginal supporters; adhesions of the uterus absolutely contraindicate the operation. The free, even excessive, mobility of the uterus is considered the one condition justifying it.

If the pelvic floor is intact and the displacement is merely a retroversion or retroflexion with but slight descensus, Dr. Mundé says his experience entitles him to state that the operation of shortening the round ligaments is sufficient to bring about a cure. If the operation is a success, the suspension of the uterus is permanent. When, however, the perineum is destroyed, or the pelvic floor injured or so relaxed as to give no support to the vaginal walls—which in consequence prolapse and drag down the uterus—or when there is complete prolapse of the uterus and vagina, it is necessary to supplement Alexander's operation by an operation to narrow the vagina, and restore the perineum. Under these conditions it seems like trifling with the operation to employ it alone.

Dr. Mundé reports twenty-three operations, of which nineteen were successful; in two, the ligaments were not found, and in two they were both torn off. The nineteen cases remained under observation for periods varying from three months to three and one-half years, and in all but one of these cases the uterus was retained absolutely in the position it occupied at the conclusion of the operation. In one case the fundus dropped slightly backward, but the elevation of the

whole organ was maintained, and the operation was a success. The danger of Alexander's operation is regarded by Dr. Mundé as practically *nil*, if proper antisepsis is maintained.

This paper of Dr. Mundé's is a timely one, pointing out as it does the true field of usefulness for Alexander's operation, a field which is occupied neither by vaginal pessaries, by plastic operations on the vagina and perineum, nor by the newer operation of hysterorrhaphy, or ventro-fixation of the uterus.

PHTHISIS AS A NEUROSIS.

It is somewhat remarkable to find an earnest and industrious student of phthisis, at the present day advocating a theory in regard to its nature which almost entirely—if not quite—ignores the bacillus tuberculosis. We say "almost entirely" because, as we understand Dr. Mays's lectures on Pulmonary Consumption considered as a Neurosis, which were published in the *Therapeutic Gazette*, November 15 and December 15, 1888, he discusses more especially that form of phthisis which begins with a catarrhal inflammation in the alveoli of the lungs, and describes lesions which some students of the subject would say were not really tubercular. We say "if not quite," because we believe he has little faith in the etiological *rôle* very generally attributed by pathologists to the tubercle bacillus, and because his lectures make no distinction between the kind of phthisis to which he refers and any kind in which this bacillus is found.

The substance of his argument is that certain unquestionable neuroses are found associated with phthisis, or alternating with its exacerbations. He describes a number of cases, the histories of which he has collated, which seem to support his view, and claims that it is supported by a study of the nervous element to be found in the fatigue, the aphonia, the dyspnœa, the sweating, the anorexia, the diarrhœa, the hæmoptysis, the œdema and the thoracic pain of phthisis. His conclusion is that a proper interpretation of all the facts shows that pulmonary consumption is a peripheral disease, connected with a depreciation of the whole nervous system caused by a central lesion. He thinks that it is possible for a neurosis of the pneumogastric nerve to give rise to all the lesions generally found in phthisical lungs, although this may not be demonstrable by experiment.

The nearest analogue to the *rationale* of phthisis which he presents, is found, he says, in herpes zoster, in which a neurosis is accompanied by manifestations on the surface, which are characterized by an inflammatory process and destructive lesions.

This theory of phthisis is too startling to be accepted at once; and yet there may be more in it than appears at first sight. It is certainly ingenious, and deserves careful consideration. To our mind the argument of Dr. Mays, while interesting, is by no means conclusive. There can be no question that the nervous system suffers very seriously in phthisis, and that some of its phenomena—such as sweating—are plainly of a neurotic character; but to attribute all of its phenomena to a central nervous disturbance seems to us a step by no means warranted by the evidence adduced.

It is to be hoped that others, who have made consumption the subject of special study, will take up the theory proposed by Dr. Mays, and test it by their own observations; so that, if correct, it may receive the stamp of their approval; and, if incorrect, it may be clearly disproved.

A BILL TO INCREASE the salary of the Surgeon General of the Marine-Hospital service from $4,000 to $5,500 has been introduced into Congress by Senator Cullom. This increase would make the salary equal to that received by the Surgeon General of the army. As the present incumbent of the office of Surgeon General of the Marine-Hospital Service has just entered upon

the office of editor of the *Journal of the Amer. Med. Association*, which has heretofore carried with it a salary of $6,000, the bill referred to, if it should become a law, will make his income a very good one.

THE CASE OF DRS. MCCOY AND WILDMAN.—Drs. McCoy and Wildman, who are practising medicine in Philadelphia and advertising extensively in the daily papers, were formerly located in Chicago, where their certificates were revoked for alleged unprofessional conduct by the Illinois State Board of Health. It seems that Dr. McCoy appealed to the Supreme Court against the decision of the Board, and swore that he had never been served with a notice to appear before the Board, and that, therefore, the revocation of his certificate was illegal. The Court, in the absence of sufficient evidence of service, decided in favor of McCoy. As Wildman's certificate was revoked because of his association with McCoy, the Governor under the circumstances was obliged to reverse the decision of the Board. The Chicago *Medical Standard*, Jan., 1889, says that in the case now pending before the Supreme Court there is reason to believe that a real and not a pseudo-McCoy has been served, and that the glowing miraculous "cures" reported by hypochondriacs will disappear from the advertising pages of the great dailies.

—D. M. Burgess, Sanitary Inspector Marine-Hospital Service, reports to Surgeon-General Hamilton, under date of Jan. 2, that there were 571 deaths in Havana, Cuba, during the month of December. Twenty-six of the deaths are reported to have been caused by yellow fever, 26 by pernicious fever, 1 by paludal fever, 7 by typhoid fever, 2 by small-pox, 1 by diphtheria, 2 by croup, and 3 by glanders. Twenty-six dying of pernicious fever, while during the same time only one died of any other form of paludal fever, leads to the suspicion that pernicious symptoms due to yellow fever may have been confounded with those produced by malarial poison.

BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

BASHORE'S IMPROVED CLINICAL CHART OF TEMPERATURE, PULSE AND RESPIRATION, DESIGNED FOR DAILY RECORDING OF CASES IN HOSPITAL AND PRIVATE PRACTICE. By HARVEY B. BASHORE, M.D. 50 charts, in tablet form. Size, 8 by 12 inches. Price, 50 cents net. Sold by F. A. Davis, Philadelphia.

These charts are arranged so that the variations in the Temperature, the Pulse, and the Respiration are recorded in spaces provided as in most "temperature sheets." The specimens sent us are not in tablet form; but are detached sheets. Each sheet contains spaces for three weeks' time. They are fairly well printed, but would be more desirable if better paper were used.

QUESTIONS AND ANSWERS ON THE ESSENTIALS OF ANATOMY. By CHARLES B. NANCREDE, M.D., Senior Surgeon to Episcopal Hospital, etc. With 117 illustrations. Small 8vo, pp. 352. Philadelphia: W. B. Saunders, 1888. Price, $1.00.

This volume of "Saunders' Question Compends" is the largest of the series, and one of the most important. Its bulk is partly due to the space occupied by the questions; but principally to the fullness with which the author has treated his subject. It is quite a complete treatise on anatomy, and its descriptions are clear and distinct. Its illustrations are chiefly made from plates used in the first edition of Leidy's Anatomy, and show the marks of use. The printing and binding are good, and the book, as a whole, is creditable to both author and publisher.

QUESTIONS AND ANSWERS ON THE ESSENTIALS OF OBSTETRICS. PREPARED ESPECIALLY FOR STUDENTS OF MEDICINE. By WILLIAM EASTERLY ASHTON, M.D., Demonstrator of Clinical Obstetrics in the Jefferson Medical College, etc. 8vo, pp. xi, 220, with Illustrations. Philadelphia: W. B. Saunders, 1888. Price, $1.00.

The "Essentials of Obstetrics" is the fifth in the series of question compends issued by the same publisher. These compends are intended to be an aid to the student in preparing for examination. Dr. Ashton has written a book which is well adapted to this end; the subject matter is given in clear concise English, and is unusually free from errors of statement, and typographical errors. He has undoubted authority for the principles and practice advocated, but he has not selected his "authority" wisely in all instances. The chief fault of books of this kind is that they give an incomplete representation of the subject. Although Dr. Ashton has not entirely escaped errors of omission, he has done unusually well. As examples of incomplete statement, we note the subjects of the perineum, and Hegar's sign of pregnancy. No one could gain a proper conception of the anatomy and functions of the perineum, or of the technique of Hegar's sign from this book. Also under the head of puerperal septicæmia no mention is made of fevers caused by the absorption of the products of putrefaction within the birth-canal—a large and important class. With some slight exceptions there is only good to be said of this compend as an aid to students preparing for examination.

PAMPHLET NOTICES.

[Any reader of the REPORTER who desires a copy of a pamphlet noticed in these columns will doubtless secure it by addressing the author with a request stating where the notice was seen and *enclosing a postage-stamp.*]

189. THE TREATMENT OF THE FINAL STAGE OF PHTHISIS. By J. H. MUSSER, M.D., Philadelphia. From the *Medical News*, Oct. 15, 1887. 8 pages.

190. TWO CASES OF MALIGNANT ENDOCARDITIS. By J. H. MUSSER, M.D., Philadelphia. From the *Transactions of the College of Physicians of Philadelphia*, Third Series, vol. ix. 12 pages.

191. REMARKS ON VOMITING, PHYSIOLOGICAL AND CLINICAL. By J. H. MUSSER, M.D., Philadelphia. From the *Transactions of the Medical Society of the State of Pennsylvania* for 1887. 8 pages.

192. IS THE AVERAGE DENTIST OF TO-DAY A SPECIALIST IN MEDICINE? By B. H. CATCHING, Louisville, Ky. 7 pages.

193. THE GREAT VALUE OF A 0.25D. CYLINDER IN THE RELIEF OF HEADACHE AND EYE PAINS. By JULIAN J. CHISOLM, M.D., Baltimore, Md. From the *Journal of the Amer. Med. Association*, Oct. 27, 1888. 12 pages.

194. CATARACT EXTRACTIONS, WITH ONLY THE EYE OPERATED UPON CLOSED BY ADHESIVE STRIPS. By JULIAN J. CHISOLM, M.D., Baltimore, Md. From the *Journal of the Amer. Med. Association*, Nov. 3, 1888. 11 pages.

195. THE PREFERABLE CLIMATE FOR PHTHISIS. By CHARLES DENISON, M.D., Denver, Colorado. From the *Transactions of the Ninth International Medical Congress*, vol. v. 15 pages.

196. PHILOSOPHICAL PRINCIPLES OF EDUCATION AND THEIR SCIENTIFIC APPLICATION TO THE DEVELOPMENT AND PERFECTION OF MEDICAL SCIENCE. By JOSEPH JONES, M.D., New Orleans, La. 114 pages.

197. THREE SUCCESSFUL CASES OF CEREBRAL SURGERY. By W. W. KEEN, M.D., Philadelphia. From the *American Journal of the Medical Sciences*, Oct. and Nov., 1888. 43 pages.

189. This is an admirable paper giving instructions in regard to the management of patients in the last stages of phthisis, when the hope of a cure has been abandoned. The subject is one which has received little attention in the books, but it is one of the greatest importance. The details mentioned by Dr. Musser are calculated to be of great service at a very trying time.

190. This pamphlet gives the histories of two cases of malignant endocarditis: one somewhat incomplete, derived from notes of the author's father and conversations with him; and the other very full, from observations of the author himself. They are of value as a contribution to the literature of a subject which has only recently received the attention which it deserves.

191. Dr. Musser's paper on vomiting contains an interesting study of the *rationale* of this symptom, illustrated by brief descriptions of a variety of cases in which its cause was traced to obscure conditions, which might easily be overlooked. These descriptions and the comments on the cases are of the most instructive sort, and furnish an admirable example of the habit of careful observation, and intelligent association of the phenomena presented in the practice of medicine.

192. The question which forms the title of Dr. Catching's presidential address before the joint meeting of the American and Southern Dental Associations, in 1888, must be answered in the negative; but he makes a strong plea for a different state of things, and holds that every dentist should be a Doctor of Medicine in order to reach the proper level of scientific attainment, and the greatest measure of success in practice.

193. The contents of this paper have been laid before the readers of the REPORTER more than six months ago. Dr. Chisolm has found the use of a weak cylindrical glass of the greatest service in the treatment of the nervous strain and pain caused by low degrees of astigmatism, and urges ophthalmologists to look carefully for the condition for which such glasses are suitable and to apply the remedy which has proved so useful in his experience.

194. The ideas contained in Dr. Chisolm's pamphlet were laid before the readers of the REPORTER in an Editorial, in the issue of June 2, 1888. They are sufficiently indicated by the title of his paper, and are now no longer strange to ophthalmologists. Dr. Chisolm has had most excellent results by the method he advocates, and he is naturally a warm defender of it.

195. Dr. Denison is well known as an advocate of the suitability of the climate and other conditions found in Colorado to the treatment of pulmonary consumption. In the present pamphlet he goes very thoroughly over the evidence in favor of his belief, and gives a very interesting statement illustrated by two colored maps of the relative humidity and cloudiness of different parts of the United States. He also discusses briefly a very important phase of the climatic treatment of phthisis, namely, the condition of the patient, which may make removal to a high, dry and cool region wise in one case and very unwise in another.

As a whole, his paper may be commended to the attention of our readers; for serious mistakes are sometimes made in sending phthisical patients away from home, when no possible good can come of the change.

196. Dr. Jones's elaborate and interesting essay on the principles of medical education goes over a great deal of ground, including the nature of the human body and mind, and of the vital principle, as well as the general principles of reasoning and logic. It covers a large extent of time, from that of the earliest Hindoo writers to the present year. Its wide scope can only be indicated here, and it is remarkable how much the author has found to say on the subject.

197. Dr. Keen's paper, which was read at the last meeting of the American Surgical Association, contains a full account of three difficult and successful operations upon the brain. It is written in the clear and attractive style for which the author is well known, and illustrated by admirable wood-cuts. It is much more than a report of the cases described: for the author's account of his operations would serve as an excellent guide to other surgeons even if he had not concluded his paper with a summary of the technique of cerebral surgery.

The paper contained in this pamphlet was regarded as one of the most important scientific features of the recent Congress of American Physicians and Surgeons, and would well repay the careful perusal of all of our readers.

CORRESPONDENCE.

Identity of Scarlatina and Diphtheria.—A Reply.

TO THE EDITOR.

Sir: The article by Dr. Trent, in the REPORTER Jan. 12, on the Identity of Scarlatina and Diphtheria is an interesting and striking contribution to the history of a well-known fact—the frequent coincidence, or close association, precedent or subsequent, of epidemics of scarlatina and of diphtheria. All of us have noticed this close association, and all of us have doubtless seen different members of the same household affected simultaneously, one set with one disease, one with the other; all of us have seen convalescents from one disease contract the other; and some of us have had occasion to question whether the throat affection in a child suffering from scarlatina was simply that of the exanthem, or part of a superimposed diphtheria. The clinical courses of the two diseases differ essentially. But diphtheria does not protect either against scarlet fever or diphtheria, while scarlet fever does protect against scarlet fever, though not against diphtheria; this fact is sufficient in our present state of knowledge to necessitate the maintenance of the distinction between the two diseases. Though their identity has frequently been asserted, this and other considerations have prevented the acceptance of the view.

All that we are justified in asserting from observed facts, is that similar climatic and other conditions, general and local, favor the development of both diseases, and hence they are frequently associated. That some other association underlies this, as well as the association between tonsillitis and rheumatism, and between both of these and scarlatina and diphtheria, is highly probable; but just what it is the bacteriologists or the ptomainologists must be left to discover. Yours truly, S. S. C.

—The *Canadian Practitioner*, Jan., 1888, says that Miss Florence Nightingale has never recovered from the severe strain to which she was subjected in her noble work of nursing during the Crimean war. She is now an invalid from spinal disease, in her seventieth year, and is an inmate of St. Thomas's Hospital, where she will probably end her days, tenderly cared for by the nurses who in that excellent training school are reaping such benefit from the Nightingale fund of $250,000, which was raised in 1858.

NOTES AND COMMENTS.

Clinical Report on Sulphonal.

Dr. William H. Flint, attending physician at the Presbyterian Hospital, New York, in a communication to the *N. Y. Med. Journal*, Dec. 15, 1888, gives the results obtained in the employment of sulphonal in 33 cases. The clinical features upon which special stress was laid in the investigation are: The primary disease of the patient suffering from insomnia; his previous history; the dose of sulphonal administered; the time elapsing after the exhibition of the drug before sleep ensued; the duration of the sleep, its quality, and the after-effects of the remedy.

While he admits that the cases reported above are too few to justify any generalizations regarding the exact indications and effects of sulphonal, they yet offer some interesting corroborative testimony regarding its great hypnotic value already established by earlier observations. The general conclusion which may be drawn from these observations is that sulphonal, even in single doses of 20 or 30 grains, is a safe and, in the main, reliable hypnotic, free from unpleasant concomitant effects, and usually from all undesirable sequelæ. The single objectionable after-effect witnessed by Dr. Flint was moderate somnolence on the morning following the administration of the remedy. In none of the cases was there the slightest derangement of appetite or digestion, and the circulation and respiration have not been appreciably affected at the time of awaking. The cutaneous and renal secretions have neither been increased nor diminished; nausea, vomiting, and constipation have not followed the use of the drug. Several of the cases seem to show that an increase of the original dose is often not required, and that, after a certain time, natural sleep being restored, the sulphonal may be discontinued. This, he says, is the only light thrown by his cases upon the important question as to the possibility of engendering a sulphonal habit or of prejudicially affecting the organism by the continued use of sulphonal. The doctrines that sulphonal is of exceptional value in insomnia occasioned by debility, neurasthenia, and mental perturbation, and that it has no appreciable anodyne properties, receive support from the history of several of these cases. Thus, in one case, the happiest results followed the use of the drug in a destitute, homeless, neurasthenic, and exhausted patient. The same was true in

two cases of hysteria. In six cases the pain of acute rheumatism, of pelvic peritonitis, of chronic rheumatism, of sciatica, and of dysentery was not sufficiently controlled by the remedy to permit of quiet sleep. On the other hand, the pain of splenitis, of cerebral gumma, of pharyngitis, and of alcoholic gastritis, was not of sufficient violence to prevent the patients from sleeping under the influence of sulphonal. The effect of sulphonal was especially fortunate in the cases of those patients who had previously been addicted to the use of opium and of other hypnotic drugs, or were suffering from insomnia due to the withdrawal of these remedies. In four cases of insomnia due to the dyspnœa of cardiac and Bright's disease, sulphonal was powerless to produce sleep, and morphine was alone perfectly adequate to meet the indications. In a case of cardiac dyspnœa, the hydrate of amylene proved fairly successful. In two cases insomnia was occasioned by the harassing cough of pulmonary tuberculosis, but, under the influence of sulphonal, the patients slept better than usual, and although the cough continued during sleep, they were not awakened by it. Sulphonal also rendered excellent services in the insomnia of typhoid fever, as was shown in three cases.

The average length of time at which sleep ensued after the administration of the sulphonal was about an hour. The average duration of sleep was a little over six hours, and success attended the use of the sulphonal in about 82 per cent. of all the trials, and this high average of successes occurred in a series of unselected cases, many of which were plainly unsuitable for experiment with a pure hypnotic.

Danger of White Phosphorus.

At a recent meeting of the Academy of Medicine of Paris, M. Brouardel spoke on the danger of allowing white phosphorus to be employed in the manufacture of matches, and proposed that the Academy should insist that the Government prohibit it absolutely. He considered that all the prophylactic precautions advised would be without effect, inasmuch as the workmen would not follow them, preferring rather to run the risk of getting disease of the jaw than be compelled to adopt an irksome *régime*. He advises the use of red phosphorus, which has proved inoffensive in the different factories in which it has been used. Several members spoke in the same strain, and the proposition of M. Brouardel was unanimously approved.

Primary Sarcoma of the Heart.

At the meeting of the *Aerztlicher Verein zu Hamburg*, July 10, 1888, Dr. Mennig reported a case of primary sarcoma of the heart. The patient was a strong girl, 18 years old, without hereditary taint, and was well up to February 7, 1888. Her health became slowly impaired, and she became affected with loss of appetite, vomiting, dyspnœa, and finally cough with bloody expectoration.

On March 1, great dyspnœa and cyanosis, and a small, irregular and undulating pulse led to the diagnosis of an infarct in the lower lobe of the right lung, and an enormous pericardial exudate. The pericardium was tapped with a fine trocar in the fifth interspace one-finger's breadth from the left border of the sternum, and 9½ ounces of a bloody serous exudate removed. There was at once considerable improvement, which lasted eight days. The temperature during the whole disease continued normal. The pulse, in spite of the use of digitalis, did not fall below 120 after the puncture. On March 4 the presence of an infarct was no longer recognizable. On March 9 there was again great dyspnœa, cyanosis, and a thready pulse. The pericardium was punctured a second time, and within three-quarters of an hour 30 ounces of fluid removed. The pulse then improved, sleep returned, and profuse diuresis set in, and for some days the patient felt comfortable, in spite of the great frequency of the pulse—120 to 140. On March 20, the patient was punctured for the third time, and 24 ounces of fluid removed; on the 25th, the fourth puncture became necessary, and 22½ ounces were removed. Nevertheless dyspnœa and cyanosis did not disappear, œdema occurred, obstinate vomiting set in, and on the 29th of March the patient died in profound exhaustion.

The autopsy disclosed an enormous dilatation of the pericardium, which filled the whole left thorax and had compressed the left lobe of the lung from above downward into a thin leathery mass. The pericardium contained about three pints of a serous fluid, which in its upper layers was clear and yellow, in its lower thick and bloody. The pericardium itself showed no significant changes. The heart was small and flabby. In the anterior wall of the right auricle was a tumor the size of a walnut, which further investigation proved to be a spindle-celled sarcoma. There was nothing abnormal in the right lung and in the abdomen.—*Deutsche med. Wochenschrift*, Dec. 27, 1888.

Salol in Dysentery.

Dr. R. B. McCall writes to the *Medical Brief*, Nov., 1888, that in treating a case of dysentery in a child five years old he tried the methods of treatment which an experience of fifteen years had made familiar; but, as the boy continued to grow worse, he resolved to try salol, which he administered in two-grain doses every three hours. In speaking of the marked and rapid improvement which followed, he says: "In all my experience I never saw the efficiency of a medicine so unmistakably portrayed by characteristic results—the effects following close in the wake of the cause. Dose for first two days was two grains every three hours, increased to three grains, and continued at that as the maximum for three days longer; after which it was given for five days longer in diminishing quantities until left off.

"In about ten days nearly 200 grains were taken, by a child five years old, and that without the least sign of oppression, disturbance of any kind, of stomach, heart or kidneys, or of brain or mind. I believe salol is perfectly safe to be used in suitable doses at any age, and am persuaded from the above case and from a little experience in summer diarrhœas, wherein its influence was unquestionably kindly and effective, that it is destined to be a valuable agent."

Preparations of Sozoiodol in Diseases of the Nose, Throat and Larynx.

Dr. Seifert communicates to the *Münchener med. Wochenschrift*, No. 47, his experience with preparations of sozoiodol in fifty cases. Sozoiodol with talc in the strength of one part to two, or equal parts, is best for application to the mucous membrane of the nose, throat and larnyx. It is preferable in those forms of chronic rhinitis which are accompanied with abnormally profuse secretion. Sozoiodol with sodium in one-half strength was employed, only in the form of insufflations, in tuberculous ulcers of the larynx, with very satisfactory results. The powder adheres firmly to the ulcers and has, on account of its ready solubility, an intense antiseptic effect. But he used most frequently the zinc salt, in those forms of chronic rhinitis which are marked by abnormally small secretion — as isolated forms of hyperplastic rhinitis, and the different forms of atrophic rhinitis. In the first form the secretion was not only made more profuse, but also the mucous membrane of the muscles diminished in bulk in a very striking manner after one or two weeks' treatment, consisting of an insufflation once or twice a day. In atrophic rhinitis the secretion was greatly increased and the fetor obviated. The dry pharyngitis which in most cases coexisted was also considerably improved. In the majority of the patients the strength was one part in ten; in many cases, however, in which this mixture caused disagreeable symptoms, such as violent burning in the nose, headache, and dizziness, the proportion was changed to one part in twelve. The strength must not be greater than one part to seven and one-half. The mercury salt cannot be employed because of its strong corrosive action on mucous membranes.—*Wiener med. Presse*, Dec. 16, 1888.

American Medical Students in Vienna.

Dr. G. C. Simmons, in a letter from Vienna to the *Occidental Medical Times*, Jan., 1889, says that at present among foreigners studying in Vienna, Americans take the lead, outnumbering the English by 100 to 50. The English-speaking students can always be found in company with each other. They go to the same cafés and restaurants, and in general establish the customs of their country. Their patronage is evidently desired, for the cafés subscribe liberally for English and American periodicals. The restaurants announce American dinners, and further, even in the hospital, courses in English are announced. As a consequence of this seeming partiality, an envious feeling has arisen in the minds of Austrian students, and perhaps rightfully. The foreigners crowd the best courses, pay liberally for them, and the poor Austrian student finds them too expensive. This results in the native being often compelled to receive his instruction from inferior teachers and with poor opportunities for clinical study. On the other hand, this liberal feeling for the best courses is becoming a drawback with foreigners, each year the teachers demanding higher honorariums. Such a policy will prove harmful to the success of the Vienna school, for even at this time, it is customary for the American students to stay but a few months, spending the remaining time, and money, in a centre perhaps less famous, but certainly more reasonable in its financial demands. With this single exception, there is no cause for complaint.

Removal of Nasal Polypi During Hypnotism.

The Vienna correspondent of the *Occidental Medical Times*, Jan., 1889, says: Regarding the extirpation of nasal polypi under hypnosis, Professor Schnitzler gives the following details of a case in which the patient had suffered from deafness and disturbances of respiration, owing to obstruction of the nasal passages with polypi. Hypnosis in this case was also produced by an intense light. Several large polypi, and some small ones, were extracted from both nares with the wire snare, and the pedicles touched with the galvano-cautery. The operation lasted about ten minutes, the patient remaining in a deep sleep, similar to that of chloroform narcosis. Upon regaining consciousness she had no recollection of anything that had occurred. She complained of headache for about half an hour. Later on, she was again hypnotized and the mucous membrane of the lower and middle fossæ of the nose was thoroughly cauterized with a platinum point without the patient's experiencing any sensation whatever.

Prevention of Food Adulteration.

A bill for the Prevention of Adulteration of Food has been introduced in the House of Representatives of Pennsylvania.

The bill provides for the establishment of a chemical laboratory in all boroughs and cities having Boards of Health. The laboratory is to be conducted under rules formulated by the State Board of Health, and the borough and city boards are to appoint for the enforcement of the act such chemists, inspectors and clerks as are recommended as necessary by the State Board. It is provided that the boroughs and cities shall pay the expenses. No person is to manufacture or sell, or offer for sale, any article of food or drugs adulterated within the meaning of the act. The penalty is to be a fine or imprisonment or both. The bill does not apply to cases in which any ingredient not injurious to health is added to the food or drug because of the necessity of such addition in preparing articles of commerce, and not fraudulently to increase the bulk, weight or measure, or to conceal inferior quality.

It is also provided that no person, with the intent of selling in the altered state, without notice, shall abstract from an article of food or drug any part of it, so as to affect fraudulently or injuriously its quality, substance or nature; nor shall any article so altered be fraudulently sold. Under the penalty mentioned, no person shall fraudulently sell any compound article of food or drugs not composed of the ingredients demanded by the purchaser. The inspectors are required to inspect all breweries, distilleries, bakeries, factories, dairies, stores and markets where food or medicine is prepared or offered for sale, and secure, by purchase, if necessary, daily, excepting legal holidays, samples of articles likely to be adulterated. These samples shall be submitted to the chemists for examination and analysis. Violations of the act are to be reported by the Health Boards to the proper prosecuting officers. The Health Boards are directed to act in like manner, upon ascertaining that the complaint of any citizen about food or drugs is well founded. All fines and penalties are to go into the respective city and borough treasuries.

Poisoning with Antipyrin.

Dr. Rapin communicates to the *Revue méd. de la Suisse romande*, No. 11, an account of a case of antipyrin poisoning. A young woman 28 years old, suffering with sciatica, had obtained great relief several times from fifteen and one-half grains of antipyrin, without untoward attendant symptoms. The patient was dismissed from medical treatment with the advice to take fifteen and one-half grains of antipyrin immediately if the pain should return. This the patient did five days later. Immediately after taking the drug she was seized with violent burning pain in the epigastrium, vomiting and collapse, bluish-black cyanosis of the lips and cheeks, and an itching exanthem over the whole body. The patient recovered the following day. On the other hand, two patients with arterio-sclerosis died soon after taking the same quantity of antipyrin.

Dr. E. Haffter states in the *Correspondenz-Blatt für Schweizer Aerzte*, No. 23, that he has seen fatal collapse occur in the case of a man 63 years old, suffering with severe pneumonia, one hour after he had received fifteen and one-half grains of antipyrin. The question will be asked whether the symptoms were *post hoc* or *propter hoc*. At all events, however, the steadily increasing reports of threatening symptoms after the use of antipyrin demand greater precaution in its use.—*Wiener med. Presse*, Dec. 16, 1889.

The Inoculability of Leprosy.

Dr. Charles W. Allen, in a letter to the *N. Y. Med. Journal*, Jan. 5, 1889, says that Dr. Berger, of Tampa, Fla., who has made extensive personal investigations of leprosy in Key West, Cuba, and Nassau, as well as in this country, writes to him that he is convinced that there are over a hundred cases of leprosy in Key West alone, and that he has personally inspected thirty advanced cases in that island.

Dr. Augustin A. Crane, who has recently gone to the Hawaiian Islands from New Haven and become a government resident physician in the midst of lepers, wrote Dr. Allen under date of October 29, in which he says: "Father Damien is now dying, having had a rather short course of the disease. He gives as his theory of the contagion that he was performing the last rites in an extremely foul case; that the flies were very annoying during the sacrament, and that he thinks he was inoculated upon an abrasion on the scalp by the flies." Dr. Crane describes the sufferer as being in a horrible condition. He further says: "The convict you speak of is now distinctly leprous. These two points are slight in themselves, but, as far as they go, they seem to throw whatever weight they may have on the side of inoculation as against contagion."

Treatment and Prophylaxis of Cholera.

The Paris correspondent of the *Wiener med. Presse*, Dec. 2, 1888, states that at a recent meeting of the Academy of Sciences, Dr. A. Ivert made a very practical and interesting communication upon the treatment and prophylaxis of cholera. During the expedition to Tonking, Ivert had an opportunity to observe a frightful epidemic of cholera, without being able to influence the disease with remedies. In April, 1887, he assumed the direction of the Nam-Dink hospital, and decided, from the bacillary nature of the disease, to try the effect of corrosive sublimate. He began with small doses, and observed an immediate improvement in the local condition. When the dose was increased, the diarrhœa diminished and the stools became semi-solid. In no case did vomiting occur. This is in such contrast with the symptoms produced by corrosive sublimate in healthy persons, that Ivert assumes that the drug has in cholera a specific action upon the bacilli, or upon the poison developed by them. The result of his experiment was so encouraging that Ivert placed upon this treatment all the patients with cholera who came under his observation from May 1 to June 30. The cases, he says, may be divided into three groups: 1. Pronounced cases of cholera, which present all the classical symptoms of the disease, that is to say, cases in which the disease occurs suddenly, and is announced by vomiting, violent colicky pains, numerous rice water-like evacuations, violent cramps, cyanosis, an algid state, and anuria, to which symptoms asphyxia is sometimes added—cases which tend to death. 2. Cases in which the same symptoms as those noted in the first group are present, but the course is not so rapid—cholera sicca. 3. Cases in the first stage of the disease.

The number of cases treated by Ivert was 45. Of those belonging to the first group, 3 Europeans recovered and one died; and 8 Anamites recovered and 7 died. In the second group, 6 Europeans recovered and 1 died. In the third group, 3 Europeans recovered and none died; 16 Anamites recovered and none died. Total for the three groups, 36 recoveries and 9 deaths.

Ivert employed also symptomatic treatment—hot bottles, injections of ether when there was great adynamia, inunctions of camphor or turpentine for the cramps, tea, coffee, etc.

Prophylactic treatment was instituted in all affections which predispose to cholera. In no instance did a case of cholera develop in the hospital.

As a prophylactic Ivert prescribes:

Liquoris Van Swieten	♏ cl to ccv
Rum	ʒi to ʒi ʒii
Opii pur.	gtt. xx
Aq. dest.	ʒii

M. Tablespoonful a day.

Liquor Van Swieten has the following formula:

Hydrarg. bichlor.	gr. xvss
Aq. destill.	ʒxxvi
Alcoholis (80 per cent.)	ʒiii

Treatment of Scrofulous Ophthalmia.

Dr. Augagneur says that the true cause of phlyctenular kerato-conjunctivitis is a rhinitis due to microbes, some of which ascend to the eye through the lachrymal duct. Unless the rhinitis is treated, relapses are incessant. He advises insufflation into the nasal fossæ of the following powder:

Powdered camphor,
Boric acid,
Sub-nitrate of bismuth, equal parts.

He thinks the microbes are conveyed to the nostrils upon the fingers.—*Gazette Hebdomadaire*, Dec. 21, 1888.

NEWS.

—A sanitary expert has been engaged to make an examination of the sewage system of Jacksonville, Fla.

—Those who intend to go abroad will be interested in learning that small-pox is reported to be prevalent throughout Italy.

—It is reported that Dr. R. S. Huidekoper intends to resign from the Veterinary Department of the University of Pennsylvania.

—Dr. B. L. Batterbury, in a communication to the *British Med. Journal*, Oct. 27, 1888, recommends coffee as a vehicle for antipyrin.

—The Governor of Indiana advocated, in his inaugural address, a local option law, and recommended severe penalties against adulteration of food.

—Dr. J. D. Mercur, of Philadelphia, was recently so fortunate as to capture a burglar just after he had broken open the front door and was going upstairs.

—In a communication to the *Medical Age*, Jan. 10, Dr. F. T. Paine reiterates his previous assertions as to the anaphrodisiac properties of salix nigra.

—The daily papers state that a colored boy three years old is exciting much interest in New York City through his exhibition of marvelous feats of memory.

—Dr. F. A. Neely has retired from the editorial staff of the *Memphis Medical Monthly*, because the work interferes with his practice and his teaching.

—Dr. Tanner has proposed a fasting contest in which he is to drink only water, while the other participants are to have all the alcoholic beverages they desire.

—A sophomore in Cornell University has developed small-pox. An order has been issued by the President of the college requiring every student to be vaccinated.

—The *N. Y. Med. Abstract*, Nov., 1888, says that M. Gariel, a professor in the Nantes Medical School, proposes a combination of two important therapeutic measures in his method of "general hydropathic electrization." This consists simply of a shower bath to which wires are attached in such a way as to pass electric currents through the water at the time of using it. Patients who have been unable to take the ordinary cold douche appear to have used this modification of it with advantage, on account of the quick reaction which follows its employment.

HUMOR.

MOTHER—I want to get a real sweet, smooth name for my baby daughter.

Gouty Uncle (who is thinking of a salad)—Well, why don't you call her Olive Oil?—*Boston Gazette.*

DOUBTFUL COMPLIMENT.—Hostess—"I hope you are enjoying your dinner, Mr. Fowler." Guest—"Yes, indeed. This country air has given me such an appetite that I can eat most anything."—*Boston Beacon.*

AT THE CONCERT.—"Why are these boys called 'child wonders'?" "First because they are so dexterous with their fingers; second, because they continue to be twelve years old for four or five years."—*Fliegende Blätter.*

TRUTH FROM TRUTHFUL JAMES.—"Do you swear to your circulation?" asked the advertising agent of the truthful country editor.

"No," said the truthful country editor, truthfully, "I swear at it."—*Somerville Journal.*

THE ONLY SAFE PLAN.—Oculist—"When did your eye first become inflamed?"

Patient—"Yesterday. I went up to a lady to speak to her and the peak of her bonnet—"

"I see. We have many such cases. Use this lotion and be careful while the present fashion lasts to do your talking to ladies by telephone."—*Record.*

MRS. DOLLIVER—"Oh, Henry, I have dropped the water pitcher out of the window, and I saw it light on an elderly man." Mr. Dolliver (turning pale)—"Great Scott, Jane! You don't know what damage you may have caused!" Mrs. Dolliver (in tears)—"Yes I do. It's pure china and can't be replaced for less than $20. Oh, what shall I do?"—*Harper's Drawer.*

TOO GOOD FOR LIFE.—Little Edith was required by her mother to assist in the household labor, and it fell to her lot to dust the stairs. When dusting day came around, Edith would moan "Oh, how unhappy I am!" but after she had completed her task, she would change her tune and say "How happy I am!" On the last recurrence of the dreaded day, Edith went about her work without being told. When she had finished, however, she came into the sitting-room with a sad, troubled face. "Mamma," she said, "I'se 'fraid I'se going to die. I've got so good that I love to dust."—*Boston Transcript.*